

UNIVERSITY OF CALIFORNIA

Los Angeles

Tense and aspect in Indo-European:

A usage-based approach to the verbal systems of the *Rigveda* and Homer

A dissertation submitted in partial satisfaction

of the requirements for the degree

Doctor of Philosophy in Indo-European Studies

by

Ian Benjamin Hollenbaugh

2021

© Copyright by
Ian Benjamin Hollenbaugh
2021

ABSTRACT OF THE DISSERTATION

Tense and aspect in Indo-European:

A usage-based approach to the verbal systems of the *Rigveda* and Homer

by

Ian Benjamin Hollenbaugh

Doctor of Philosophy in Indo-European Studies

University of California, Los Angeles, 2021

Professor Stephanie W. Jamison, Chair

Though Greek and Sanskrit possess clearly cognate tense–aspect categories, they differ significantly with respect to the function of these categories. This dissertation investigates the usage of the Aorist and Imperfect indicative in Homeric Greek and Ṛgvedic Sanskrit, in order to reevaluate the functional range of both categories in each language. A qualitative and quantitative examination of the data reveals that the differences in usage between the two languages are only superficial. In Homer as in the *Rgveda*, the Aorist is commonly used to express perfect aspect, while the Imperfect is used to sequence events in past narration. This thesis thus further extends the findings of Hollenbaugh 2018 in proposing that the Aorist and Imperfect do not represent a perfective/imperfective system, nor can they be traced back to such a system in the proto-language, as is often assumed. Rather, they originally marked perfect aspect and a simple past tense respectively. In addition, this dissertation explores the pragmatic interactions across functional categories to explain the lack of application of certain forms in contexts with which they are semantically compatible. The differences in usage observed for the two languages are thus attributed to systematic differences in their respective verb systems overall, rather than to any particular functional innovations *per se*. The Vedic injunctive and Homeric augmentless forms are also considered, and an account is given of the interaction between the augment and

the verbal bases with which it combines. This provides insights into why the augment and augmentless forms behave differently in the two languages in the way that they do, and suggests how each can be derived from a common source in the proto-language.

The dissertation of Ian Benjamin Hollenbaugh is approved.

David Goldstein

Tim Stowell

Ashwini Deo

Stephanie W. Jamison, Committee Chair

University of California, Los Angeles

2021

For Kristen

TABLE OF CONTENTS

| | |
|------------------------------------------------------------------------------------|-----------|
| General introduction | 1 |
| Purpose of this dissertation | 1 |
| Structure of the dissertation | 2 |
| The matter of meaning: A usage-based approach | 3 |
| Background and problematization | 8 |
| Overview of verb systems of Greek and Sanskrit | 12 |
| Sanskrit verb system | 13 |
| Greek verb system | 17 |
| 1 Methodology | 22 |
| 1.1 Texts | 22 |
| 1.2 Forms under consideration | 24 |
| 1.3 Evidence and its assessment: The usage-based approach | 27 |
| 1.4 The role of translation | 31 |
| 1.5 Corpora and data collection | 32 |
| 1.5.1 Corpus annotation in XML | 32 |
| 1.5.2 Citing frequency data and security of interpretation | 35 |
| 1.5.3 Secure augmentation | 35 |
| 1.6 Assessment and interpretation of forms in context | 37 |
| 1.7 Presentation of textual citations | 40 |
| 1.8 The notions of regularity and blocking | 41 |
| 1.9 The role of frequency data in explaining relative frequency of usage | 47 |
| 1.10 Null hypothesis significance testing | 48 |

| | | |
|----------|-------------------------------------------------------------------|-----------|
| 1.11 | The IE language family and its proto-stages | 48 |
| 2 | Semantic theory and typology of tense and aspect | 50 |
| 2.1 | Grams, gram types, and grammaticalization | 51 |
| 2.2 | Time intervals, aspect, and situation types | 54 |
| 2.2.1 | Time intervals | 54 |
| 2.2.2 | Definitions of tense and aspect categories | 57 |
| 2.2.3 | Assertion time and adverbial expressions | 59 |
| 2.2.4 | Situation types and actionality | 60 |
| 2.3 | “Perfect-like” readings: Theoretical background | 61 |
| 2.4 | Terminative readings: Theoretical background | 65 |
| 2.5 | Imperfective grams: Typology and semantics | 68 |
| 2.6 | Modality: indicative vs. modal uses of the injunctive | 74 |
| I | Aorist and Imperfect indicative in Homeric Greek | 76 |
| | Introduction | 77 |
| 3 | The augment in Mycenaean and Homeric Greek | 79 |
| 3.1 | The augment in Mycenaean | 79 |
| 3.2 | The augment in Homer | 84 |
| 4 | Aorist indicative with and without augment | 98 |
| 4.1 | “Perfect-like” readings of the Aorist | 99 |
| 4.2 | Terminative readings of the Aorist | 105 |
| 4.3 | Pluractional and modal readings of the Aorist | 111 |
| 4.4 | Functional range of the Homeric Aorist | 120 |
| 4.5 | Denotation of the Homeric Aorist | 124 |

| | |
|---------------------------------------------------------------------------------------|------------|
| 5 Imperfect with and without augment | 131 |
| 5.1 Imperfective readings of the Imperfect | 132 |
| 5.2 “Perfect-like” readings of the Imperfect | 135 |
| 5.3 Terminative readings of the Imperfect | 140 |
| 5.4 Pluractional and modal readings of the Imperfect | 147 |
| 5.5 Functional range of the Homeric Imperfect | 152 |
| 5.6 Denotation of the Homeric Imperfect | 153 |
| 6 Comparison of the Homeric Aorist and Imperfect | 155 |
| 7 The Perfect and Pluperfect indicative | 160 |
| II Aorist, Imperfect, and injunctive in the <i>Ṛgveda</i> | 164 |
| Introduction | 165 |
| 8 The augment in the <i>Ṛgveda</i> | 168 |
| 8.1 Role of the augment in the <i>Ṛgveda</i> | 168 |
| 8.2 Further differences between the use of the augment in Homer and the <i>Ṛgveda</i> | 173 |
| 9 Aorist indicative and Aorist injunctive | 181 |
| 9.1 “Perfect-like” readings of the Aorist: Examples & frequency | 184 |
| 9.2 Terminative readings of the Aorist: Examples & frequency | 193 |
| 9.3 Pluractional and modal readings of the Aorist: Examples & frequency | 206 |
| 9.4 Imperfective readings of the Aorist in the <i>Ṛgveda</i> (?): Possible examples | 214 |
| 9.5 Functional range of the <i>Ṛgvedic</i> Aorist as compared to Homeric | 219 |
| 9.6 Denotation of the <i>Ṛgvedic</i> Aorist | 225 |
| 10 Imperfect indicative and Present injunctive | 229 |

| | |
|----------------------------------------------------------------------------------------------------------|------------|
| 10.1 Imperfective readings of the Present injunctive/Imperfect: Examples & frequency . | 230 |
| 10.2 “Perfect-like” readings of the Present injunctive/Imperfect: Examples & frequency | 238 |
| 10.3 Terminative readings of the Present injunctive/Imperfect: Examples & frequency . | 247 |
| 10.4 Pluractional and modal readings of the Present injunctive/Imperfect: Examples & frequency | 256 |
| 10.5 Functional range of the Ṛgvedic Present injunctive/Imperfect | 262 |
| 10.6 Denotation of the Ṛgvedic Present injunctive/Imperfect | 265 |
| 11 Perfect indicative/injunctive and Pluperfect | 268 |
| General conclusion | 276 |
| References | 298 |

LIST OF FIGURES

| | | |
|------|----------------------------------------------------------------------------------------------------------------------------------|-----|
| 2.1 | Perfect aspect: resultative/experiential (t_E), stative (t_E'), and universal (t_E'') | 63 |
| 2.2 | Concentrative interpretation, past tense | 65 |
| 2.3 | Complexive interpretation, past tense | 66 |
| 2.4 | Inceptive interpretation | 67 |
| 2.5 | Egressive interpretation | 67 |
| 2.6 | Progressive/continuous-state and habitual interpretations, past tense (available to Type 1, 2, and 3 imperfectives) | 69 |
| 2.7 | Complexive interpretation, past tense | 70 |
| 2.8 | Concentrative interpretation, past tense | 71 |
| 9.1 | Progressive-like interpretation of perfect(ive) aspect | 218 |
| 11.1 | Most common “perfect-like” interpretations of the Perfect (t_E) and Aorist (t_E') | 271 |

LIST OF TABLES

| | | |
|------|------------------------------------------------------------------------------------------|-----|
| 2.1 | Semantic weakening of tense–aspect gram types over time | 54 |
| 2.2 | Typical “tripartite” perfective/imperfective system | 54 |
| 2.3 | Typology of imperfective grams | 69 |
| 2.4 | Aspectual systems differing by complexive use | 72 |
| 2.5 | Western Slavic aspect | 72 |
| 2.6 | Homeric aspect | 73 |
| 3.1 | Readings of the Aorist with and without the augment in Homer | 96 |
| 4.1 | Readings of the Homeric Aorist as compared to the Imperfect and Pf./Plpf. ind. | 98 |
| 4.2 | Distribution of the Aorist in quoted speech and narrative in <i>Iliad</i> 1 | 120 |
| 5.1 | Readings of the Homeric Imperfect as compared to the Aorist and Pf./Plpf. ind. | 131 |
| 5.2 | Semantic distribution of the Imperfect in <i>Iliad</i> 1 | 152 |
| 7.1 | Frequency of uses of the Perfect and Pluperfect in <i>Iliad</i> 1 | 162 |
| 8.1 | Distribution of the augment in Vedic and Homeric (summary) | 177 |
| 8.2 | Regular temporal and modal usage in Vedic and Homeric (summary) | 178 |
| 9.1 | Readings of the Ṛgvedic Aor. inj./ind., Pres. inj./Ipf., and Pf. ind./inj./Plpf. | 181 |
| 9.2 | Performative vs. resultative interpretations of the Aorist | 206 |
| 9.3 | Distribution of the Aorist indicative/injunctive in Ṛgveda II (137 total) | 219 |
| 10.1 | Readings of the Ṛgvedic Pres. inj./Ipf., Aor. inj./ind., and Pf. ind./inj./Plpf. | 229 |
| 10.2 | Distribution of the Imperfect/Present injunctive in Ṛgveda II (148 total) | 263 |
| 11.1 | Distribution of the Pf. ind./inj./Plpf. in Ṛgveda II (124 total) | 273 |

ACKNOWLEDGMENTS

When I first came to UCLA I had a very specific notion of what most interested me about language but only the vaguest comprehension of how to go about pursuing it. As a Classicist I always found myself studying the “Syntax” portions of Smyth 1956 and Allen & Greenough 1903, and I knew I had an interest in clause structure, the uses of moods and tenses, and the shades of meaning that arise from the combination of tense, aspect, and modality. Beginning the Program in Indo-European Studies (PIES) at UCLA, I had a the sense that I would not be able to contribute anything to this expansive field until I had mastered a dozen or more ancient Indo-European languages and could confidently and casually summarize the historical phonology of any given branch on a moment’s notice. But within a month I found myself giving my first talk at the PIES graduate seminar, in which I more or less attempted to map onto Hittite grammar the classification of conditional sentences familiar to me from Greek and Latin (“future less vivid” and the like). It was with great patience and much support from faculty and fellow students that, over the next few years, I gradually found ways to study, in a methodologically rigorous manner, what it was I so loved about verbs. As it turned out, the “syntax” that most interested me was not syntax at all, in the generative sense, but morphosyntax, semantics, and pragmatics. I am endlessly grateful to the PIES graduate seminar for giving me a venue in which to experiment with new ideas, often half-baked and meandering in the beginning, and to the many colleagues and mentors who offered suggestions and direction on how to proceed further.

I am especially grateful to Stephanie Jamison, who supervised my first inquiry into Vedic tense usage (GSRM 2016), providing invaluable comments every step of the way. This project was the germ of what would become much of my research program over the next four-and-a-half years, including my 2018 paper in *Indo-European Linguistics* on tense and aspect in Homer and the *R̥gveda* (Hollenbaugh 2018), as well as my 2020 paper in the *Journal of the American Oriental Society* on prohibitions in the *R̥gveda* and the *Atharvaveda* (Hollenbaugh 2020a), and, ultimately, this dissertation. Without Stephanie’s constant encouragement, guidance, feedback, characteristic kindness, and generosity with her time, none of these projects could have been brought to bear, and my work owes much of its quality—and none of its faults—to her mentor-

ship.

During my first, formative year at UCLA I was fortunate to be instructed by Ryan Sandell and Chiara Bozzone, who taught me Indo-European phonology, morphology, and syntax. It was in Ryan's courses that I first learned how to apply methods of linguistic theory to the data of the ancient IE languages. Chiara, meanwhile, introduced me to the world of linguistic typology, most importantly Bybee et al. 1994, a book that would shape my thinking on tense, aspect, and grammaticalization in the years to come. So much of productive linguistic inquiry depends on asking the right questions, thinking outside the bounds of received wisdom, and this is a skill that both Ryan and Chiara helped me cultivate early on in my career and which underlies all of my work since.

A unique benefit of the interdisciplinary nature of PIES is its intersection with the departments of Linguistics and Classics at UCLA, both of which have been instrumental to my development as a scholar. Among the many welcoming faculty members in Linguistics was Tim Stowell, whose willingness to chat about all things tense–aspect matched my own. Tim not only helped me develop my ideas but often challenged my assumptions and pushed me to always refine my way of thinking, to the great benefit of my work, including and especially this dissertation. David Goldstein has been another essential figure in the development of my research program. He has a way of reigning in my ideas, making sure I am careful about saying exactly what I mean, and always orienting my claims in terms of state-of-the-art scholarship. I've come to expect (indeed depend on) David's characteristic way of asking the kinds of deep, fundamental questions that I struggle to provide satisfactory answers to, as even the attempt to do so invariably improves my work and the clarity of its presentation. I am fortunate also to have had the opportunity to work with Ashwini Deo, who has long been an academic hero of mine. Ashwini's input has been crucial to the formulation of coherent semantic accounts of the forms studied in this dissertation, and I am grateful for her thoughtful comments and patient guidance in the production of this work. In general, this dissertation has benefited from a committee whose members have each been sympathetic to its aims, even when these were underdeveloped or were formulated in ways that they found problematic. The heart of the thing was always in view for them, even when they had to squint to see it, and they have each in their own way assisted in

making what was clear in my head clear to the reader. Any remaining infelicities are, of course, my own.

I wish to thank every PIES faculty member and student, past and present, with whom I had many fruitful discussions over the years and from whom I received invaluable feedback in preparing my work for presentation. In particular, I wish to thank John Clayton for his generous assistance with the computational side of my work—XML, \LaTeX , data querying, and so on. It is no stretch to say that this dissertation could not have been presented in the way that it is without John's help. I am also grateful to Craig Melchert for his tireless support and willingness to answer, with characteristic thoroughness, any question about Anatolian I might have, and to Brent Vine for his helpful comments on Homeric and Mycenaean Greek and, more generally, for being a guiding force throughout my time at UCLA, as both advisor and mentor. In addition, there have been a number of supporting figures within the IE studies community outside of UCLA, and chief among them has been Ben Fortson. It was Ben who first recommended that I apply to the Program in Indo-European Studies at UCLA, who read *Mahābhārata* with me over the summer in Ann Arbor after my first year, and who followed my work closely over the years, checking in at intervals with great interest and persistent encouragement.

Finally, this dissertation could not have happened without the love and support of my spouse, Zeineb, who aside from reminding me to eat when I get too wrapped up in my work is always willing to listen with sincere interest to my latest thoughts about verbs and help me formulate my new ideas in a coherent way. Zeineb is a fountain of encouragement, in good times and bad, and is both the inspiration and the motivation for the completion of this work.

When I came to UCLA I came with my then fiancée, Kristen, to whom this work is dedicated. No one has ever believed in me more, and I'm grateful for every second that I got to share on this earth with her, brief as it was. We set out for LA together with a common goal. And though we could not achieve it together I know I have never been alone in its pursuit. It is with my eternal love and gratitude that I dedicate the fruit of all my labor—six years in the making—to her.

VITA

| | |
|-----------|---------------------------------------------------------------------------------------------|
| 2013 | B.A. in English and Classics, Western Michigan University |
| 2013–2014 | Presidential Scholar of English, Western Michigan University |
| 2013–2014 | Instructor, Department of World Languages and Literatures, Western Michigan University |
| 2015 | Classics Post-Baccalaureate Certificate, Department of Classics, UCLA |
| 2016 | Graduate Summer Research Mentorship (under Prof. Stephanie W. Jamison), UCLA |
| 2016–2017 | Graduate Research Mentorship (under Prof. Stephanie W. Jamison), UCLA |
| 2017 | Graduate Summer Research Mentorship (under Prof. David Goldstein), UCLA |
| 2017–2018 | Teaching Assistant/Instructor, Cluster Program in Undergraduate Education Initiatives, UCLA |
| 2018 | Mellon Foundation Pre-Dissertation Fellowship, UCLA |
| 2019 | Graduate Certificate in Linguistics, Department of Linguistics, UCLA |
| 2019 | Graduate Certificate in Classics, Department of Classics, UCLA |
| 2019 | Teaching Assistant, Department of Linguistics, UCLA |
| 2019–2021 | Teaching Assistant/Instructor, Department of Classics, UCLA |
| 2020 | Reader for Prof. Alex Purves, UCLA |
| 2020–2021 | Dissertation Year Fellowship, UCLA |

PUBLICATIONS AND PRESENTATIONS

PUBLICATIONS

Forthcoming. Habitual BE in American English. Festschrift for Prof. Tim Stowell.

2021. The development of the Imperfect in Ancient Greek from simple past to imperfective as a blocking phenomenon. *Journal of Greek Linguistics* 21.1.

2020. Inceptives in Ancient Greek. In David M. Goldstein, Stephanie W. Jamison, and Brent Vine (eds.), *Proceedings of the 31st Annual UCLA Indo-European Conference (November 8–9, 2019)*: 139–159. Bremen: Hempen.

2020. A New Approach to Prohibitive Constructions in the *R̥gveda* and the *Atharvaveda*. *Journal of the American Oriental Society* 140.4:777–802.

2018. Aspects of the Indo-European Aorist and Imperfect: Re-evaluating the evidence of the *R̥gveda* and Homer and its implications for PIE. *Indo-European Linguistics* 6:1–68.

2017. Synchronic and Diachronic Derivation of Greek *n*- and *nt*-stem Nominative Singular Formations. In David M. Goldstein, Stephanie W. Jamison, and Brent Vine (eds.), *Proceedings of the 28th Annual UCLA Indo-European Conference (November 11–12, 2016)*, 95–118. Bremen: Hempen.

PRESENTATIONS

June 2021. Drewitt’s Rule and the origin of the augment. 40th East Coast Indo-European Conference (online).

January 2021. Prohibition types in Ancient Greek: A comparative approach. Society for Classical Studies Annual Meeting (online).

June 2020. Augmented reality: A diachronic pragmatic approach to the development of the IE injunctive and augment. 39th East Coast Indo-European Conference, Blacksburg, Va.

March 2020. Pragmatics, discourse context, and common ground: Hymn-initial injunctives in the *Ṛgveda*. 230th Annual Meeting of the American Oriental Society, Boston, Mass.

November 2019. Simple past to imperfective in Ancient Greek via blocking. Formal Diachronic Semantics 4, The Ohio State University, Columbus, Ohio.

November 2019. Starting over: Inceptives in Ancient Greek. 31st Annual Indo-European Conference, UCLA.

October 2019. It be's like that sometimes: On the consuetudinal use of substantive BE. Celebration for Prof. Tim Stowell, University of Greenwich, London.

July 2019. Getting Going: Inceptives in Ancient Greek. UCLA–LMU Historical Linguistics Colloquium, Ludwig-Maximilians-Universität, München.

March 2019. *bhūtakaṛaṇa* or *āgama*? The subtractive semantics of the augment in the *Ṛgveda*. 229th Annual Meeting of the American Oriental Society, Chicago, Ill.

November 2018. Don't stop *mā* now: A New Approach to Prohibitive Constructions in the *Ṛgveda* and the *Atharvaveda*. 30th Annual Indo-European Conference, UCLA.

November 2017. The morphological Aorist as a semantic perfect: Evidence of the *Ṛgveda* and Homer and its implications for PIE. 29th Annual Indo-European Conference, UCLA

March 2017. Preventing inhibition: A reassessment of the prohibitive constructions in Early Vedic. 227th Annual Meeting of the American Oriental Society, Los Angeles, Calif.

November 2016. Synchronic and diachronic derivation of Greek *n*- and *nt*-stem nominative singular formations. 28th Annual Indo-European Conference, UCLA

GENERAL INTRODUCTION

Purpose of this dissertation

This dissertation aims to understand the meaning and usage of the Aorist and Imperfect/Present injunctive in Homeric Greek and Ṛgvedic Sanskrit.¹ To do this, I have reexamined the attested usage of the Aorist and Imperfect indicative in Homer and the *Ṛgveda*, then quantified that usage for particular corpora in order to make statistical analysis possible. On the basis of their functional ranges and the relative frequencies of their meanings in context, I assign each form a denotation and provide a pragmatic explanation for the observed frequencies of each of its uses. I then align these functional categories with typologically motivated “gram types” that express tense and aspect. Finally, I assess how the distributional facts observed for each language can be explained as arising from a common origin in the proto-language. In particular, on the basis of the semantic agreement of the Vedic and Homeric Aorist and Imperfect, along with formal semantic and typological considerations, I propose that the observed behavior of the two functional categories in both languages can be explained as deriving from a system that originally opposed perfect aspect (Aorist) and simple past tense (Imperfect) in the proto-language. The Aorist, as a marker of perfect aspect, developed along a cross-linguistically robust trajectory of semantic change into the attested daughter languages, having become somewhat more “perfective-like” in both languages and thus aligning with the cross-linguistic category that I refer to as “emergent perfective.” This conclusion differs fundamentally from the traditional account of Indo-European (IE) tense–aspect, which reconstructs a perfective/imperfective system for Proto-Indo-European (PIE) and is therefore unable to give a coherent explanation as to why and how the Imperfect in these languages does not exhibit a particularly imperfective character, in terms of its usage, and why the Aorist in the *Ṛgveda* is so uncommon in past sequential narration, where perfective aspect markers tend to flourish in other languages. Under my analysis, on the other hand, these distributional facts are directly

1. The various tense–aspect forms are referred to throughout as “functional” or “morphological” categories. On the capitalization of *Aorist*, *Imperfect*, etc. see Section 2.1 below.

predicted.

Structure of the dissertation

After introducing the problem and relevant background below, I discuss my methods of research, data collection, and analysis (Chapter 1) and lay the theoretical and typological groundwork for my analysis (Chapter 2). The remainder of the dissertation is divided into two main parts. The first part concerns Homeric Greek (and to a lesser extent Mycenaean). The second part concerns Ṛgvedic Sanskrit. Both of these follow the same general procedure. I first examine the augment in each language to show that it is not responsible for marking tense or aspect (Chapters 3 and 8). I then investigate the aspectual meanings expressed by each verbal base in turn, beginning with the Aorist (Chapters 4 and 9), then the Imperfect and, in the case of Ṛgvedic, the Present injunctive (Chapters 5 and 10), providing examples and discussion for each reading, as well as the frequency with which each reading occurs in my corpora. At the end of each of these chapters I summarize the usage of each form to determine its functional range and assign each form a denotation that captures this functional range. I also attempt to explain the form's observed usage, including the relative frequency of occurrence of different uses, which typically involves an exploration of the systematic interactions of functional categories within the verb system (pragmatic competition between forms). For Homeric, where the distinction between the Aorist and Imperfect is especially subtle, I provide a chapter examines the interaction of the two forms with one another, showing what their distinctive functions are and identifying contexts in which their functional distinctions are neutralized (Chapter 6). Appended to each part is an overview of the usage of the Perfect/Pluperfect (Chapters 7 and 11), for the sake of comparison with the two main forms here under investigation. Finally, I offer general conclusions, including a comparison of the functional categories of the two languages, as well as a discussion of the implications of my findings for other Indo-European languages and for semantics and linguistic typology more generally.

The matter of meaning: A usage-based approach

The meaning of the various verbal categories in Indo-European (IE) is a matter of relatively little scholarly debate. This is not for lack of activity in pursuit of the origins and many puzzles of IE verbal morphology, but because the matter of meaning is generally considered a secondary issue in verbal reconstruction. This is partly with good reason, as it is unclear how the traditional comparative method might be applied to semantic reconstruction, at least on its own. There is thus no well established methodology according to which diachronic semantic analysis may proceed in the same way as there are for other lines of inquiry in historical linguistics.

There are other roadblocks as well that have served to establish so firmly the primacy of form over function. Semantics is typically considered after one has proposed a reconstruction of a word or morphological category on the basis of formal matches across languages. Without any clear constraints on how semantic change can proceed, it is easy to attribute to the reconstruction whatever meaning makes the formal match seem most plausible. In some cases, meaning is treated as little more than an obstacle to be overcome in pursuit of a formal match. If form A can be argued to be cognate with form B, their formal similarity may be explained by positing a proto-form C. But if the meaning of form A scarcely resembles that of B, this is typically not taken as a reason to reject the reconstruction C outright. Given a formal match with a functional mismatch, standard practice seems to dictate that the analyst should search for any conceivable path from the meaning of A to the meaning B, or else assign a meaning to C that is sufficiently broad so as to accommodate all of its putative descendants. This again is not without some rationale. For we have a problem of falsifiability. While there are known principles governing phonological and morphological change, semantic change is comparably unconstrained. So why shouldn't function take a back seat to form?

Yet there have been many advances in the field of diachronic semantics which have constrained our methods considerably. We may not be able to predict the precise change in meaning of a particular lexeme over time, but we do have a relatively detailed understanding of the trajectories along which functional categories like tenses and moods tend to grammaticalize, and there are known paths of change that may be considered typical of particular functional

categories. These can serve as a check on the likelihood of our reconstructions and the paths of development we posit. In addition, formal pragmatics can provide insights into the mechanisms that govern semantic change and help us make informed hypotheses about how an invited inference at one stage of a language may lead to conventionalized meaning at a later stage. Formal semantics, too, can help our explanations be more rigorous by making explicit predictions about what the functional range of a form will be. These predictions, crucially, can be either borne out or falsified by the data.

Discerning semantics on the basis of (or in spite of) morphology leads to a related issue: What counts as data for the reconstruction of meaning? The form itself has typically been used as the basis for our assumptions about function. So, for example, coming upon a Present participle in Greek, we assume it must represent the event as ongoing, precisely because it is a Present participle. Yet we run into problems when confronted by an example like (1), where reading the Present participle *θνήσκων* as ‘while he was dying’ (or similar) is impossible. Such an interpretation would imply that Atreus left the scepter to Thyestes as he lay dying. But this cannot be the meaning, since we know that that is not what happened. Atreus had banished his brother Thyestes for trying to usurp the throne of Mycenae, and it was only after Thyestes’ son Aegisthus killed Atreus that Thyestes was able to receive the kingship and the scepter.

- (1) Ἄτρεὺς δὲ *θνήσκων*_[PRES.PART.] ἔλιπεν πολύαρνι Θυέστῃ,
αὐτὰρ ὃ αὖτε Θυέστ’ Ἀγαμέμνονι λείπε φορῆναι (*Il.* 2.106–7).

‘And Atreus, **upon his death**_[PRES.PART.], left (the scepter) to Thyestes rich in flocks, and Thyestes in turn left it for Agamemnon to bear’

In my view, the most straightforward solution to interpretative problems of this kind is to simply concede that the form has a broader functional range than had been supposed, in this case that the Present participle can have an anterior meaning like ‘after he had died, upon his death’, which does not present the action as ongoing. Yet, despite the fact that translators generally produce a translation like the one I have given (e.g., Alexander 2015:26), the meaning of the Present stem is generally assumed nevertheless to exclude anterior interpretations. The Present, we are told, describes events as ongoing; it is a function of the *Aorist* participle to express anteriority (see, e.g., Chantraine 1953 [2015]:219). But curiously, even though (1) is so blatantly at

odds with what the function of the Present participle is said to be, commentaries tend to pass over this occurrence of *θνῆσκων* in silence. There is little impulse, it seems, to explain why we have a Present participle here, and even less to explain why we do not have an Aorist participle, which according to the grammars and well known tendencies of usage would be the form presumably better suited to this context (cf., e.g., *Il.* 17.564, with the Aor. participle *θανών* ‘having died’).

When it comes to Homer, of course, meter is often held up as an explanation for such oddities, and it is true that the Aorist participle *θανών* would not fit the metrical slot which *θνῆσκων* occupies in this line. Yet, as Platt (1891:226) puts it, “the Homeric poets, as indeed they had some mastery of their art, ruled their verse in the main instead of being ruled by it.” Metrical explanations only go so far. For it is necessary that the metrical substitution be minimally compatible with the target meaning. Here, for instance, one could say that the Present participle is in some sense “unmarked” and so may “fill in” for the Aorist participle when the meter calls for it but otherwise has its distinctive character, referring to events in progress or ongoing states of affairs. But if the Present participle had a meaning truly opposite to the Aorist it could no more be used in its place for metrical convenience than could the Future tense for an Imperfect. Moreover, there are in fact many occurrences of Present participles with anterior meaning in Homer, and meter cannot explain them all.² Some of these may be accounted for by paradigmatic suppletion for verbs that do not build Aorist stems, as when the Pres. part. *ἰών* is used in the meaning ‘having gone’ (to *εἶμι* ‘go’, which lacks an Aorist). But in either case the Present participle must minimally be said to be *compatible* with the anterior interpretation, otherwise it could not be “substituted” for the Aorist, whether in the service of meter or to fill a paradigmatic gap.

Yet when such matters are ignored or overlooked, we end up with much more data in support of our preconceptions than, in my view, the languages actually provide. So, the mere existence of a Present participle in Greek may be taken as a basis for reconstructing a Present stem

2. Other Present participles with anterior interpretations include: *ἄγων* ‘having led’ (e.g., *Il.* 1.311, 440; *Od.* 4.525), *ἰών* ‘having gone’ (e.g., *Il.* 1.179), *ἐφείς* ‘having shot at’ (e.g., *Il.* 1.51), *πρό τ’ ἐόντα* ‘the things which have happened before, the past’ (e.g., *Il.* 1.70), *νέον. . . ἐρχομένη κατ’ ἄρ’ ἔζεθ’* ‘having just come in she sat down’ (*Od.* 8.289–90). Note that in the last example her sitting event logically must follow her event of coming in.

that “s’emploie pour insister sur la durée du procès” (Chantraine 1953 [2015]:225). We thus run into a problem of confirmation bias, as there is small desire to look for what we assume we already know. To avoid this, I propose to take not forms but usage itself as data for my analysis. On this approach, the Present participle in (1) is treated not just as an occurrence of the Present participle in Homer but as one data point of the Present participle’s usage, namely an example of the anterior function of the Present participle. Such data is thus inextricable from the context of the verb’s occurrence; indeed it crucially depends on it.

A final barrier to precision in the reconstruction of functional categories is that it is extremely difficult to describe meaning in a rigorous way, and impossible to do so in an entirely non-subjective manner, particularly when dealing with languages that have no living native speakers. Interpretations may rely on context clues but must in the end come down to the philological judgments of the analyst. And even after such judgments have been made, how are the findings to be reported? There is a lack of agreed-upon vocabulary—even among specialists—to adequately describe specific functions of verb forms, and there is no obvious way of deciding what would qualify one such functional label as any more legitimate than another.

I have wrestled with these issues at length in the production of my research, and while I of course can offer no absolute way of interpreting or reporting patterns of verbal usage, I believe it is possible to do these things in a relatively constrained way. One important step is to quantify the semantic data. In his recent book, Willi (2018:387) remarks of the usage of the Imperfect in Homer that “a statistical verification is impossible since it is very often difficult to decide which function a given imperfect form has.” It is certainly true that it is difficult to discern a verb’s precise function in any given context, but if we are concerned with *categorical* usage, rather than finding the “correct” reading of any given occurrence of a verb, then by looking at enough data surely particular patterns of usage will emerge that give us a reasonably secure notion of the functional range of the verbal category in question. The philological scruples that concern one or another data point are of less and less importance the more data we have. For this reason, I have sought to quantify what is fundamentally qualitative data. By looking systematically at all verbs in a particular corpus, I attempt the kind of “statistical verification” that Willi (2018:387) deems impossible.

There have been few, if any, studies of this kind to date. One known to me is Avery's (1885) study of verbal usage in the *R̥gveda* and the *Atharvaveda*, in which he sorts various uses of verbal categories into types and gives precise counts for each label. More recently, E. Dahl's (2010) book on the Vedic verb system made important strides in the way of semantic rigor by defining categories of meaning that could then be looked for in the usage of the verbal categories of the *R̥gveda*, thus assigning them particular meanings on the basis of their observed usage. But there is nothing in the way of statistical analysis in E. Dahl's (2010) book, nor comparison of categories and their interactions with one another.

In this study, I have drawn on E. Dahl's (2010) precedent of formal semantic analysis applied to ancient texts, but I have added to it a corpus study in the spirit of Avery 1885. Thus, while I draw data from the whole of the *R̥gveda* and the Homeric epics, I have chosen just one book apiece of these texts and analyzed every verb that occurs therein. The former allows me to take a holistic approach to usage, considering uses that may not show up in my limited corpora purely by chance. The latter allows me to observe large-scale patterns of usage that are difficult to identify on a case-by-case basis. I am able to produce relative frequencies of occurrence of particular usage types. This procedure allows me to say not only what sorts of expression a particular functional category is capable of but, in absolute terms, how frequently it is actually used to express them. I can then compare these frequencies across categories to see, for instance, how often the Aorist is used in a particular context as compared to the frequency of the Imperfect in the same sort of context. Looking at domains of intersection between competing verb forms helps us understand the functional range of each form: In contexts where either form can occur, the meanings of the two forms can be said to overlap; where one form regularly occurs to the exclusion of the other, their meanings can be said to differ. In this way, our understanding of each functional category is refined not only by awareness of how it can be used but also of how it cannot be used. This helps us to get closer to being able to say, in each case, why a particular verb form occurs as well as why alternative verb forms do *not* occur, and the analysis thus approaches genuine explanation.

Having a clear notion of what semantic data looks like, namely usage categories, and a way of gathering reasonably accurate frequency data for them, allows me to base my linguis-

tic comparisons and reconstructions on actual usage data. Relying on this, and guided by what is known of grammaticalization cross-linguistically, I have applied the comparative method to my findings for each of the two languages studied here (see especially §§9.5 and 10.6). This enables me to get a clearer sense of what the function of these forms would have been like in the proto-language than has previously been possible, and hence to better account for their observed similarities and differences in the functional domain. The usage-based approach applied here is thus a productive method for understanding synchronic verbal semantics as well as for studying semantic change. Crucially, the diachronic considerations rely on solid synchronic analyses. For this reason, synchronic study of the Homeric and Ṛgvedic verb systems (insofar as these can be treated as synchronic objects) occupies the bulk of this dissertation.

Background and problematization

As discussed in Hollenbaugh 2018, the distinction between the Aorist and Present stems in Indo-European linguistics is generally assumed to align with a distinction of perfective and imperfective aspect, with the Aorist expressing perfective meaning and the Present expressing imperfective.³ Yet when we look at the usage of these forms in the earliest texts of Greek and Sanskrit—languages in which they are especially well preserved—it is difficult to maintain what I will call the traditional perfective/imperfective model of IE tense–aspect. In particular, the attested usage of the forms built to the Present stem do not always align with what might be thought of as imperfective meaning, and it is not always easy to see in what sense the usage of the Aorist is “perfective.” As aspectual contrasts tend to be most salient in the finite past (cf. Comrie 1976:71), I will restrict my discussion here to the Aorist and Imperfect indicative.

In Vedic, it is a known fact that the Imperfect does not signify imperfective meaning, as observed (e.g.) by Whitney (1889:278): “The imperfect... is the tense of narration; it expresses simple past time, without any other implication” (similarly Kiparsky 1998:29, 56–7, n.3). Further, he says that “In no period of the Sanskrit language is there any expression of imperfect... time”

3. Cf., e.g., Delbrück 1893:15, 230–41, 268–9; Napoli 2006:46–7, 64–70; Rijksbaron 2002:11; Fortson 2010:83; Weiss 2020:401; Ö. Dahl 1985:83; Comrie 1976:17.

(Whitney 1889:201), by which he undoubtedly means that Sanskrit did not have a specific, grammaticalized form that designated imperfective aspect in the past. Likewise, the usage of the Vedic Aorist is not in doubt. Whitney (1889:329) says that the Vedic Aorist “had the value of a proper ‘perfect’, signifying something past which is viewed as completed with reference to the present” (similarly Delbrück 1893:240, 278–81). The Aorist is thus most often translatable by the *have*-Perfect in English.

The Homeric tense–aspect forms are more generally held to be divided along perfective/imperfective lines, as Chantraine (1953 [2015]), for instance, repeatedly insists. Yet there are many who have noticed the apparently “Aorist-like” uses of the Imperfect, such as Goodwin (1889:7), who observes that “the Imperfect is sometimes found in simple narration, where the Aorist would be expected, especially in Homer.” Wackernagel (1926–8 [2009]:235) says of the Imperfect in Homer:

Often, particularly in early Greek... to our way of thinking imperfect and aorist are used completely interchangeably in reports about the past... Homer has in fact many imperfects which serve as straightforward narrative forms, without depicting the action or the process any more than the corresponding aorist. We simply have to recognize, especially in view of comparison with related languages, above all Sanskrit, that the imperfect was often the narrative tense.⁴

Delbrück (1879:105, 114) concludes similarly that, from an Indo-European perspective, “Das alte Tempus der Erzählung ist das Imperfectum und nicht der Aorist... aber im Griechischen der Aorist demselben immer mehr Terrain ab hat” (“The old tense of narration is the Imperfect and not the Aorist... but in Greek the Aorist gains more and more ground from it”).⁵

Perfectives (and simple pasts) are cross-linguistically preferred for sequencing events chronologically in past narration (E. Dahl 2010:78, Forsyth 1970:64–6), of the type expressed in

4. See similarly E. Dahl 2010:78; Goodwin 1889:7–8.

5. Concerning the Greek Aorist, Delbrück (1879:103) suggests that “ist der Aorist der Griechen nie ein Tempus der Erzählung gewesen” (“the Greek Aorist has never been a tense of narration”), though in fact the Aorist is not uncommonly used in sequential narration at all stages of Greek (Rijksbaron 2002:13; Hollenbaugh 2018:30–31, 33, 44; 2021b).

English by the Preterite *I tripped and fell*. Because in Greek the Aorist is common in this function, the sequential narrative use of the Imperfect is often viewed by the grammarians as being in some sense “Aorist-like.” I provide examples of the Imperfect indicative in its sequential narrative function (this will later be called the concentrative-terminative interpretation) from the *R̥gveda* (2) and from Homer (3) (the latter repeated from (1) above). In all numbered examples of this dissertation the relevant verb and its translation are in boldface. Underlining is used for other contextual (mostly adverbial) information in the passage that helps motivate the particular interpretation of the verb that I favor, or which is relevant to the reading in some way but is not the primary focus of the example.⁶

(2) IMPERFECT IN SEQUENTIAL NARRATION IN THE *R̥GVEDA*

*māyāvīnaṃ vr̥trām **asphuran nīh**_[IPF.]*
***ārejetām**_[IPF.] ródasī bhiyāné* (RV II.11.9bc).

‘(Indra) **kicked away**_[IPF.] wily Vr̥tra. The two worlds **trembled**_[IPF.] in fear’.

(3) IMPERFECT IN SEQUENTIAL NARRATION IN THE *ILIAD*

Ἄτρεϋς δὲ θνήσκων ἔλιπεν_[AOR.] πολύαρνι Θυέστῃ,
 αὐτὰρ ὁ αὔτε Θυέστῃ Ἀγαμέμνονι **λεῖπε**_[IPF.] φορῆναι (Il. 2.106–7).

‘And Atreus, upon his death, left_[AOR.] (the scepter) to Thyestes rich in flocks, and Thyestes in turn **left**_[IPF.] it for Agamemnon to bear’.

Of the Aorist in Greek, Wackernagel (1926–8 [2009]:227) says that it “often does the job of denoting an action which has just been effected,” a use which he points out as being “particularly well represented in the Sanskrit aorist” (similarly Delbrück 1893:280–1). To illustrate this common “perfect-like” use of the Aorist in both languages, I provide an example from the *R̥gveda* (4) and from Homer (5).

6. Citations of the *Iliad* (Il.) are to West 1998–2000; those of the *Odyssey* (Od.) are to West 2017. Except where noted, translations are my own. In many examples from the *R̥gveda* (RV), I rely on the translation of Jamison & Brereton (2014). This is done in order to (help) avoid confirmation bias: If I believe a particular reading should be understood for a given verb in context (say, ‘have done X’), it strengthens the case if authoritative translators have arrived at the same reading independently. In the citations of the text of the *R̥gveda* I often undo the application of sandhi, in order to more clearly show the division of relevant words.

(4) AORIST WITH “PERFECT-LIKE” INTERPRETATION IN THE *ṚGVEDA*

īyúṣ_[PF.] té yé pūrvatarām āpaśyan viuchántīm uśásam mártiyāsaḥ
*asmābhir ū nū praticákṣiyā **abhūd**_[AOR.] ó té yanti yé aparīṣu páśyān* (RV I.113.11).

‘They have gone_[PF.], the mortals who saw the earlier dawn dawning forth. (This dawn) **has now come to be**_[AOR.] gazed upon by us. And there are those coming hither who will see (the dawn) in the future’ (tr. Jamison & Brereton 2014:264; ex. E. Dahl 2010:264–5).

(5) AORIST WITH “PERFECT-LIKE” INTERPRETATION IN THE *ILLIAD*

ῆ δὴ μῦρί’ Ὀδυσσεὺς ἐσθλὰ ἔοργεν_[PF.]
βουλὰς τ’ ἐξάρχων ἀγαθὰς πόλεμόν τε κορούσων,
νῦν δὲ τόδε μέγ’ ἄριστον ἐν Ἀργείοισιν ἔρεξεν_[AOR.] (Il. 2.272–4).

‘Truly Odysseus has done_[PF.] countless good deeds as leader in good counsel and waging war, but now he **has done**_[AOR.] *this*, the best (thing) by far among the Argives’ (ex. Wackernagel 1926–8 [2009]:227).

In these respects, the usage of the Aorist and Imperfect in Homer resembles the *Ṛgveda* more closely than is commonly supposed, yet it is usually said that Vedic, and not Greek, has innovated in terms of its tense–aspect usage (e.g., Lowe 2015:213). Though noted by various scholars (e.g., Delbrück 1893:280–1), these functional matches in the usage of the most ancient texts of Sanskrit and Greek has not been adequately appreciated, and its implications for the IE verb system have only just begun to be explored (see Hollenbaugh 2018). To more fully understand the extent to which the verbal usage of Homeric Greek and *Ṛgvedic* Sanskrit can be said to be similar or different, I here undertake a full investigation of the function of the Aorist and Imperfect in these languages. In addition to the augmented indicative forms, I also include in this investigation the augmentless Aorist and Imperfect of Homer and the Aorist and Present injunctive of the *Ṛgveda*, as well as a cursory treatment of the Perfect indicative/injunctive and Pluperfect. I propose to examine the usage of the various functional categories in these texts, as well as the way in which they interact with one another. In so doing, I aim to refine our understanding of the function of each form within its verb system, based not on our preconceptions about its meaning but on its attested usage. This in turn increases our understanding of the

relationship between the two languages and how their respective verb systems may have developed.

Overview of the verb systems of Greek and Sanskrit

I provide in this section an overview of the verb systems of Greek and Sanskrit for the benefit readers who may be less familiar with the grammars of these languages, or who wish for a quick reference to the relevant verbal morphology, in hopes that the analysis here presented will thus be more widely accessible. As the purpose of my inquiry is to determine the semantic functions of these forms, I will confine myself here to purely morphological discussion, save for the most basic and uncontroversial of semantic observations about these categories. Fuller treatments can be sought in any of the usual handbooks, e.g.: for Sanskrit, Whitney 1889 or Macdonell 1916; for Greek, Smyth 1956 or Chantraine 1948 [2013].

Both languages distinguish what are commonly referred to as primary and secondary endings. These are agreement markers that indicate person, number, and voice on finite verbs. The primary endings are used for non-past verb forms, including the Present and Future indicative and the subjunctive mood (though in Sanskrit this can also have secondary endings). The secondary endings are used elsewhere, including the Aorist, Imperfect, and Pluperfect indicative, the optative mood, and (in Sanskrit) the Aorist, Present, and Perfect injunctives (formally equivalent to the augmented Aorist, Imperfect, and Pluperfect in Homer). Sanskrit also uses secondary endings for the conditional and sometimes for the subjunctive mood. There are special sets of endings for the imperative mood (in the second and third persons) and for the Perfect indicative (and partially for the Pluperfect in Greek). There is also an “augment,” which takes the form ϵ - in Greek and \acute{a} - in Sanskrit and is prefixed to verbs in the Aorist, Imperfect, and Pluperfect indicative—definitionally so in Vedic (the augmentless forms are the injunctives) and “optionally” in Homeric (though the augment becomes obligatory on these forms in later Greek). The various stem classes are treated in what follows, along with other language-specific details.

Sanskrit verb system

Vedic is the earliest attested stage of the Sanskrit language, recorded in the four Vedas, of which the *R̥gveda* is the most ancient, preserving many archaisms unknown to the later language. The Vedic verb system consists primarily of three tense–aspect stems: the Present, the Aorist, and the Perfect. These may have active or mediopassive inflection, with three numbers—singular, dual, and plural—in the first, second, and third persons.

From the **Present** stem is built a Present indicative, an Imperfect indicative, a Present “injunctive,” various modal forms—subjunctive, optative, imperative—and Present participles in *-nt-* (active) and *-(m)āna-* (mediopassive). There is also a Future tense in *-sya-* + primary endings, from which a conditional can be built by adding the augment and secondary endings.

The stems of the present system may take various shapes, known as present classes, with different morphological characterizations that synchronically do not correspond to differences in meaning. There are ten such present classes. Class II consists of Present stems built directly to the root, known as root Presents. Classes I and VI are thematic (i.e., have a stem vowel *-a-*), differing from one another by accent and grade of the root. Class IV has a thematic suffix *-ya-*. Classes V, VII, VIII, and IX are varieties of “nasal infix” Presents, characterized by a nasal element infixed to the root. Class III is characterized by reduplication. Finally, class X has the suffix *-aya-* (without causative meaning).

Various other stem formations involving derivational morphology also operate within the Present system. There is a valency-increasing suffix in *-āya-* which attaches to the root to form what is often called the “causative,” though it is not fully developed as such in the early Vedic period (see Jamison 1983). A passive is built with the suffix *-yá-*, and denominatives are formed with a suffix *-yá-* as well. A desiderative is made by reduplication and the suffix *-s-*. Lastly, there is an intensive produced by (metrically) “heavy” reduplication of the root syllable with athematic inflection.

For the Present and Future tenses and sometimes the subjunctive, the verbal endings are called “primary endings.” They are as follows:

| Primary endings | | | | | | |
|-----------------|------------|--------------|----------------|--------------|--------------|----------------|
| active | | | | mediopassive | | |
| | sg. | du. | pl. | sg. | du. | pl. |
| 1 | <i>-mi</i> | <i>-vás</i> | <i>-más(i)</i> | <i>-é</i> | <i>-váhe</i> | <i>-máhe</i> |
| 2 | <i>-si</i> | <i>-thás</i> | <i>-thá</i> | <i>-sé</i> | <i>-áthe</i> | <i>-dhvé</i> |
| 3 | <i>-ti</i> | <i>-tás</i> | <i>-á(n)ti</i> | <i>-té</i> | <i>-áte</i> | <i>-á(n)te</i> |

For the remaining finite verb forms (and sometimes the subjunctive), a different series of endings are employed, called “secondary endings.” They are as follows:

| Secondary endings | | | | | | |
|-------------------|------------|-------------|----------------|--------------|---------------|-----------------------|
| active | | | | mediopassive | | |
| | sg. | du. | pl. | sg. | du. | pl. |
| 1 | <i>-am</i> | <i>-vá</i> | <i>-má</i> | <i>-í/-á</i> | <i>-váhi</i> | <i>-máhi</i> |
| 2 | <i>-s</i> | <i>-tám</i> | <i>-tá(na)</i> | <i>-thás</i> | <i>-áthām</i> | <i>-dhvām</i> |
| 3 | <i>-t</i> | <i>-tām</i> | <i>-án/-úr</i> | <i>-tá</i> | <i>-átām</i> | <i>-á(n)ta/-rán/m</i> |

The Present tense indicative is made by affixing primary endings to the Present stem. The Present injunctive is made by affixing secondary endings to the Present stem. The Imperfect indicative is identical to the Present injunctive except that it has a prefix *á-*, called the “augment,” which is only used with finite, indicative verb forms. This is schematized as follows, using *bháva-* ‘become’ as an example. Here, “aug.” stands for ‘augment’, and “PE” and “SE” stand for ‘primary ending’ and ‘secondary ending’ respectively.

| | indicative | injunctive |
|-----------|--------------------------------------|-----------------------------|
| Present | <i>bháva-ti</i> stem + PE | <i>bháva-t</i> stem + SE |
| Imperfect | <i>á-bhava-t</i> aug. + stem + SE | |

The **Aorist** stem has four formations: A “root Aorist,” built directly to the verbal root; a thematic Aorist, with the root in zero-grade and a stem-final accented thematic vowel (*-ā*); a reduplicated Aorist, which often corresponds in meaning to the *-āya-* causatives of the Present system, thus making a causative Aorist; and a sibilant Aorist, with lengthened or full grade of the root and a sibilant suffix of various shapes (*-s-*, *-iṣ-*, *-siṣ-*, or *-sa-*). Except in the case of the reduplicated Aorist, the various Aorist stem classes do not reflect a synchronic distinction in meaning. The finite Aorist forms take secondary endings (except sometimes in the subjunctive). Its indicative is always augmented (*á-*). A special passive Aorist is built directly to the root, only in the third person singular (with the ending *-ī*) or plural (in *-ran/ -ram*). There is also an Aorist injunctive, which is descriptively the indicative Aorist minus the augment. I give an example below of the Aorist to $\sqrt{bhū}$ ‘become’.

| | indicative | injunctive |
|--------|------------------------------------|----------------------------|
| Aorist | <i>á-bhū-t</i> aug. + stem + PE | <i>bhū́-t</i> stem + SE |

To the Aorist stem may also be built modals—subjunctive, optative, imperative, precative—and an Aorist participle in *-nt-* (active) and *-(m)āna-* (mediopassive).

Finally, the **Perfect** is made by reduplication of the first root consonant and athematic inflection with a special series of Perfect endings, which are as follows:

| Perfect endings | | | | | | |
|-----------------|-------------|---------------|--------------|------------|--------------|--------------|
| active | | | mediopassive | | | |
| sg. | du. | pl. | sg. | du. | pl. | |
| 1 | <i>-a</i> | <i>-vá</i> | <i>-má</i> | <i>-é</i> | <i>-váhe</i> | <i>-máhe</i> |
| 2 | <i>-tha</i> | <i>-áthur</i> | <i>-á</i> | <i>-sé</i> | <i>-áthe</i> | <i>-dhvé</i> |
| 3 | <i>-a</i> | <i>-átur</i> | <i>-úr</i> | <i>-é</i> | <i>-áte</i> | <i>-ré</i> |

From the Perfect stem may be built a Pluperfect by adding secondary endings and the augment (*á-*). The Perfect injunctive is identical to this except that it lacks the augment, as shown below

for \sqrt{cit} ‘perceive’ below. Here, “PfE” stands for ‘Perfect ending’. Note that the secondary ending *-t* does not show up in the surface form *(á)ciket*, but I have included it in parentheses so as to make the derivation clear.

| | indicative | injunctive |
|------------|----------------------------------------|-------------------------------|
| Perfect | <i>cikét-a</i> stem + PfE | <i>cikét(-t)</i> stem + SE |
| Pluperfect | <i>á-ciket(-t)</i> aug. + stem + SE | |

The Perfect stem also has a full range of modal formations—subjunctive, optative, imperative—as well as participles in *-vāms-* (active) and *-ānā-* (mediopassive).

To all finite verb classes, the subjunctive is formed by suffixing a vowel *-a-* to the verbal stem (with primary or secondary endings), the optative with the suffix *-e-* or *-yā-* (zero-grade in the middle voice: *-ī-*), and the imperative with a special set of endings. The precative is the Aorist optative plus an *-s-* after the vowel of the optative suffix (*-yā-s-*).

Various nominal formations to verbal roots also exist: Passive participles in *-tá-*, gerundives in *-ya-*, various verbal nouns used in their oblique case forms as infinitives (in *-(i)tum*, *-tave*, *-taye*, *-ase*, *-m/vane*, *-áye*, *-dhyāi/-ṣyāi*, etc.), and agent nouns in *-tṛ-* that have some verbal functions. There are also gerunds in *-(t)yā-*, *-tvā(ya)*, or *-tvī-*, which have anterior meaning of the type *hatvī* ‘having smashed’. Participles may be predicated, typically in a progressive sense (cf. §10.1 below). In addition, periphrastic constructions are occasionally met with, with such verbs as $\sqrt{sthā}$ ‘stand’ and a predicated participle having the sense of a progressive tense (cf. §10.1 below). These will be addressed on a case-by-case basis in the texts, as no progressive periphrastic construction is fully grammaticalized in the language.

In general, the augmented indicatives—Imperfect, Aorist, and Pluperfect—are past referring, or else present referring in a “perfect-like” sense. The Perfect indicative is also very often past referring but may be “presential,” as in *āha* ‘says’. The “injunctive” forms do not necessarily express injunctions. They are often equivalent in meaning to their augmented counter-

parts (i.e., indicative), though their frequency of application in particular contexts differ from that the indicatives. The injunctives may additionally express a full range of modal readings—subjunctive (i.e., future), optative, and imperative—or may have generic/gnomic present (or “timeless”) habitual meaning. A negative command or prohibition is expressed by the injunctive after the negator *mā* ‘don’t’.

As for the moods, the subjunctive is most often a simple future tense in the *Rgveda*, but it can have other modal uses as well, including generic-habitual interpretations (Hoffmann 1967:115, 238–9). The imperative expresses a direct positive command to the addressee and may occur in all persons and numbers, though the subjunctive is slotted in for the first persons and the remaining forms are identical to the injunctives except in the second and third persons singular and the third person plural. Negative commands, however, are only regularly made with the injunctive. The optative expresses all other modal meanings (variously translatable by modals like ‘would’, ‘should’, ‘may’, ‘might’, etc.).

The meaning of participles in the *Rgveda* is a complex topic, for which the reader is referred to Lowe’s (2015) rich treatment of the subject.

Greek verb system

Homeric Greek is our oldest attested literary Greek, consisting of the two epics of Homer (the *Iliad* and *Odyssey*), the works of Hesiod, and various texts of unknown authorship, largely fragmentary, including the Epic Cycle, the Homeric Hymns, and the *Shield of Heracles* (see §1.1 below). Its verb system is similar to Vedic in many respects. It too inflects for three persons in three numbers, though unlike Vedic the Homeric dual is not obligatory for subjects consisting of two members. Like Vedic, there is an active and a mediopassive series of inflectional endings. An Aorist passive can be made with the suffix $-(\vartheta)\eta-$, of obscure origin but possibly from a stative suffix in $*-eh_1-$ (cf. Latin second-conjugation statives in $-\bar{e}-$, such as *cal-ē-re* ‘to be hot’).

There are primary and secondary endings which mostly match the form and distribution of those in Vedic: The primary endings are used for the indicative Present, Future, and Future Perfect and the subjunctive mood. The secondary endings are used for the past tenses indicative

Aorist and Imperfect and the optative mood. The Homeric Perfect has reduplication patterns and endings similar to its cognate in Vedic. The Aorist, Imperfect, and Pluperfect indicative are prefixed with the “augment” ἐ- (corresponding to Sanskrit á-) or a long vowel in the case of vowel-initial verbs. However, the augment is not obligatory in Homeric Greek, and augmentless Aorists, Imperfect, and Pluperfects are common at this stage of the language. Mycenaean has no secure example of an augmented verb.

The subjunctive is marked either by the vowel -ε-/ο- (e.g., ἔδ-ο-μαι ‘will/may eat’), as in Vedic (corresponding to -a-), or by a long vowel (e.g., λύσ-ω ‘will/may release’). The optative is marked by addition of -ι- to a stem vowel -ο-, -ε-, or -α-, resulting in a diphthong -οι-, -ει-, or -αι- (also athematic full grade in -ιη-, as in εἴην, the 1sg. opt. of εἶμι ‘be’). The imperative again has special endings and does not occur in the first person, where the subjunctive is used instead. Negative commands are marked by μή plus either the Aorist subjunctive or the Present imperative (with few exceptions), which differs from the Sanskrit use of the injunctive in this function.

Participles built to the Present and Aorist stems may be active (-ντ-) or mediopassive (-μενο-); those built to the Perfect stem have a special set of endings in the active (nom.sg.m. -ώς, f. -υῖα, n. -ός, gen.sg.m./n. -ότος, etc.), but may also be mediopassive (-μενο-). Infinitives are built to Present, Aorist, and Perfect stems, ending in -ειν, -εμεν(αι), -αι, or -ναι in the active and -σθαι in the middle. Some other nominal and adjectival verbal forms are met with as well, such as verbal adjectives in -τέος with gerundive meaning (i.e., necessity or obligation, as in λυτέος ‘(is) to be released’), and in -τος or -τός often indicating ability in an active or passive sense (e.g., θε-τός ‘placed, adopted’ (< *d^h₁-tós, cf. Vedic *hi-táh*), δυνατός ‘capable (active), possible (passive)’).⁷

The three main series of verb endings are as follows:

7. Though the -τός ending corresponds to -tá- in Vedic and Latin Perfect passive participles in -tus, it is not nearly so integrated into the verbal paradigm of Greek as it is in these other languages.

| Primary endings | | | | | |
|-----------------|------|----------------|--------------|------------|--------|
| active | | | mediopassive | | |
| | sg. | pl. | | sg. | pl. |
| 1 | -ω | -ομεν | | -ομαι | -όμεθα |
| 2 | -εις | -ετε | | -ει/-η/σαι | -εσθε |
| 3 | -ει | -ουσι(ν)/-οντι | | -εται | -ονται |

| Secondary endings | | | | | |
|-------------------|----------|-----------------|--------------|------------------|----------|
| active | | | mediopassive | | |
| | sg. | pl. | | sg. | pl. |
| 1 | -(ο)ν/-α | -α/ομεν | | -ά/όμεν | -ά/όμεθα |
| 2 | -(α/ε)ς | -α/ετε | | -ω/-ου/- (α/ε)σο | -α/εσθε |
| 3 | -ε(ν) | -ον/- (σ)αν/-εν | | -α/ετο | -α/οντο |

| Perfect endings | | | | | |
|-----------------|-------|---------|--------------|------|-------|
| active | | | mediopassive | | |
| | sg. | pl. | | sg. | pl. |
| 1 | -α | -αμεν | | -μαι | -μεθα |
| 2 | -ας | -ατε | | -σαι | -σθε |
| 3 | -ε(ν) | -ασι(ν) | | -ται | -νται |

The Pluperfect has special endings in the singular active: 1sg. -η, 2sg. -ης, 3sg. -ει.

Where the Vedic verb system has injunctive Aorist, Present, and Perfect forms, which have both modal and indicative functions, Homeric has only augmentless indicatives. Formally, these correspond precisely to the Vedic injunctives, but functionally they are indicative. Thus, an Imperfect indicative in Homer may be made by adding secondary endings to the Present stem with or without accompanying prefixation of the augment ἐ-. Likewise, the Aorist indicative may be built with secondary endings on the Aorist stem with or without the augment. And

finally, the Pluperfect, built to the Perfect stem, may or may not have an augment, the augment-less form being of more frequent occurrence in Homer.

I provide here the finite indicative forms built to the Present, Aorist, and Perfect stems of λύω ‘release’. Note that the Imperfect, Aorist, and Pluperfect indicative may have the augment ἐ- or not.

| | |
|--------|------------------|
| Aorist | ἐ-λύ-σ-ε(ν) |
| | aug. + stem + SE |
| | λύ-σ-ε(ν) |
| | stem + SE |

| | |
|-----------|------------------|
| Present | λύ-ει |
| | stem + PE |
| Imperfect | ἐ-λύ-ε(ν) |
| | aug. + stem + SE |
| | λύ-ε(ν) |
| | stem + SE |

| | |
|------------|-------------------|
| Perfect | λέλυκ-ε(ν) |
| | stem + PfE |
| Pluperfect | ἐ-λέλυκ-ει |
| | aug. + stem + PfE |
| | λέλυκ-ει |
| | stem + PfE |

The meanings of the tense–aspect forms correspond roughly to those in Vedic (the details of their correspondence and divergence being the subject of the present investigation), except for the Perfect which most often has stative meaning (e.g., τέθνηκε ‘is dead’), though it may also have other “perfect-like” interpretations (e.g., ἔοργεν ‘has done’). In contrast to Vedic, the Perfect indicative in Homer is virtually never used in past sequential narration (i.e., concentrative terminative). Both the Aorist and the Imperfect are used in sequential narration in Homer, as in Vedic but with different frequencies relative to one another than are found in the *R̥gveda*. In addition, there is a “gnomic” use of the Aorist indicative in Greek—conspicuously absent from Vedic—that is found almost exceptionlessly with the augment ἐ- and is used to refer to general truths or habitual actions not confined to any particular time (past, present, or future),

often found in similes and extended metaphors in Homer. This use of the Aorist requires special treatment and discussion (see especially §§3.2 and 8.2 below).

As in Vedic, the subjunctive is often used as a simple future tense in Homer, though modal uses of various shades are met with. The Homeric subjunctive is only made with primary endings, whereas in Vedic either primary or secondary endings may be used. The optative is used for wishes and potentiality, in addition to a few other irrealis functions. The imperative is used for direct commands; its negative is μή followed by the Aorist subjunctive or the Present imperative. The modal particles ἄν and κε(ν) occur with the indicative, subjunctive, or (most often) the optative mood to convey various shades of meaning, often having a generalizing effect or modifying the force of the modal form to signify counterfactuality or unreality. It has no counterpart in Vedic.

CHAPTER 1

Methodology

1.1 Texts

For the data of Homeric Greek, I focus mainly on the two epics of Homer. These are the *Iliad* (*Il.*) and *Odyssey* (*Od.*), composed in lines of dactylic hexameter (15,693 lines in the *Iliad*, 12,109 in the *Odyssey*) and divided into 24 books each. While the *Odyssey* shows signs of being composed somewhat later than the *Iliad* and is, linguistically speaking, slightly less archaic, both epics can be said to date from about the 8th century BCE. Though the epics are linguistically the most archaic texts in alphabetic Greek, the “Homeric” dialect also includes a variety of fragmentary and somewhat less archaic texts. These are the fragments of the Epic Cycle, the Homeric Hymns (*HH*), and the works of Hesiod (Hes.)—*Theogony* (*Th.*) and *Works and Days* (*WD*)—and of “Pseudo-Hesiod” (Ps.-Hes.), namely the *Shield of Heracles* (*SH*). Where relevant or informative I will make occasional reference to these non-epic Homeric texts. I also make occasional reference to Mycenaean Greek, especially in Section 3.1. The Mycenaean documents are pre-alphabetic (written in Linear B) and are the most ancient witnesses of Greek that we have, dating from about 1400 to 1200 BCE. Though it is extremely difficult, due to the nature of the documents, to say much for certain about verbal usage in the Mycenaean texts, I make note of uses plausibly attested in Mycenaean wherever possible in my treatment of the Homeric stage (Chapters 4 and 5).

On the Sanskrit side, I draw data almost exclusively from the *R̥gveda* (*RV*). The *R̥gveda* is the most ancient text attested in the most archaic variety of the Sanskrit language, known as Vedic or Vedic Sanskrit. It consists of 1,028 hymns in about 10,600 lines, written in a variety of meters and collected in ten books called *maṇḍalas*. These hymns were composed by a number of dif-

ferent poets over a considerable period of time (completed c. 1200–1000 BCE). I make passing reference to post-Ṛgvedic texts where relevant or informative but do not base any conclusions on these. This is mainly because the grammar of the Vedic language changes so rapidly after the *Ṛgveda* in a number of ways relevant to tense, aspect, and modality. In particular, the use of the injunctive is much more restricted in post-Ṛgvedic Vedic literature than it is in the *Ṛgveda*, being used less frequently and mainly in modal (rather than indicative) uses, whereas in the *Ṛgveda* one of its most common functions is as an indicative preterite (cf. Avery 1885). It is important to observe a stage of the language that fully preserves the indicative uses of the injunctive, since this is what we find in Homer (i.e., the augmentless Aorist, Imperfect, and Pluperfect). In addition, the usage of the Aorist and Perfect change considerably in later Vedic, and the modal system becomes increasingly restricted to the Present stem. The language of the *Ṛgveda*, which I will refer to as Ṛgvedic Sanskrit, thus preserves the most archaic grammar available and so provides the best evidence for comparison with Homeric Greek.

Neither of the principal texts studied here really represents a synchronic stage of the language in which it is written. Both the Homeric epics and the *Ṛgveda* consist of diachronic layers of composition. In addition, both are metrical, written in poetic register, and are thus somewhat artificial literary languages. From a scientific perspective this is, of course, not ideal and limits the reliability of the “synchronic” grammars described for each language as well as the validity of the comparative reconstruction based on them. Nonetheless, we must work with what we have, and I assume that treating the Homeric epics and the *Ṛgveda* as representing *roughly* synchronic grammars—artificial though this may be—can shed considerable and linguistically valuable light on the origin, development, and usage of the grammatical categories of these languages. Moreover, in addition to treating these two texts as a whole I have also conducted two small corpus studies: one on the first book of the *Iliad* and one on the second Maṇḍala of the *Ṛgveda*. These provide something closer to a synchronic stage of the language, since, whereas there are often linguistically significant differences between one book and another within these texts, there is far less variability within a single book. Maṇḍala II belongs to the most ancient layer of the *Ṛgveda*, called the Family Books (II–VII), and all but seven of its hymns are attributed to a single poet, Gṛtsamada (cf. Jamison & Brereton 2014:399). *Iliad* 1, for its part, contains a

number of particularly archaic features and seems to belong to the compositional “core” of the text of the *Iliad*. Thus, by closely examining small portions of the texts in addition to looking at each text as a whole, I hope to present as clear a picture as possible of what the usage of the various functional categories looked like in the earliest attested stages of these languages.

1.2 Forms under consideration

I have chosen to consider in this study only the Aorist and Imperfect indicative and, for the *Ṛgveda*, the Aorist and Present injunctive. *Injunctive* is the common English term for a morphological category in Vedic grammar, which is descriptively the Aorist, Imperfect, or Pluperfect without the augment (cf. the introduction above). It is thus formally equivalent to the augment-less Aorist, Imperfect, or Pluperfect in Homeric Greek. Despite its name the injunctive is not restricted to expressing injunctions but may have both modal and indicational uses and, like its Homeric counterparts, is regularly past referring. For the sake of completeness and comparison, I also offer some reference to the usage of the Perfect/Pluperfect indicative/injunctive, though I do not give these as full of a treatment as I do the other forms.

There are several reasons for studying these functional categories in particular. First and most important, these are the functional categories for which aspectual contrasts are most readily observable (see §2.2 below). It is a well documented fact that, across languages, aspectual contrasts are most robust in the past tenses of the indicative (see Comrie 1976:71; Ö. Dahl 1985:81–84; Napoli 2006:25–26; *inter alios*). This is partly because perfective aspect does not typically operate in the present time (though there are exceptions to this, such as the performative/reportive and stative uses, discussed below) and therefore does not stand in direct contrast to the imperfective aspect in the indicative except in the past tense. In Greek and Vedic in particular, the Aorist indicative/injunctive is not marked for tense, in the sense that it has no morphologically encoded distinction between past and non-past. Because it is generally past referring (or “perfect-like”), it contrasts more directly with the Imperfect than with the Present indicative.⁸

8. The resultative, experiential, and universal readings of the perfective aspect are indeed presential. However,

Moreover, it seems that present tenses tend to be somewhat “biased” toward imperfective-like meaning—regardless of whether they are built to what might be termed an imperfective gram or not, due largely to the fact that the most salient function of the present tense is to refer to an event as *ongoing* at the time of speech (requiring that $t_A \supseteq t_{0/S}$, explained in Chapter 2 below).⁹ In this way, whether a morphological stem expresses imperfective or, say, neutral aspect is somewhat obscured in the present indicative. This, coupled with the fact that the perfective aspect contrasts with the imperfective aspect most prominently in the past, points to the Imperfect/Present injunctive as the form maximally informative of the functional range of the Present stem in Greek and Vedic, standing in clear contrast to the Aorist indicative/injunctive in its various aspectual uses in the past time.

The Perfect is considered here as well, and full data has been collected for its occurrence and usage in both corpora, primarily for the sake of comparison where relevant to the Imperfect and Aorist. I do not, however, analyze the Perfect to the same extent as the Aorist and Imperfect/Present injunctive. This is because the Aorist and Imperfect/Present injunctive stand in more direct opposition to one another in both Homeric and Vedic and are accordingly more in-

the first two are not common readings of the present (though the Greek Present can have such interpretations on occasion: e.g., resultative ἡ μέγα πένθος Ἀχαιῖδα γαῖαν ἰκάνει ‘Truly great grief has come upon the land of Achaea’ (*Il.* 1.254) and experiential σε πάρος περ / ῥύοιμ’ ‘I have protected you before’ (*Il.* 15.256–257)), while the universal reading is typically expressed by the Present indicative in Greek (e.g., ἐκ τοῦ . . . ὀμιλέομεν Δαναοῖσιν ‘since that (time) we have been fighting the Danaans’ (*Il.* 13.779)). In addition, the Present can, like the Imperfect, be used to sequence events in past narration (though not in Homer (Chantraine 1953 [2015]:191)) and, like the Perfect, regularly has continuous-state interpretations in the present time. So, while the functional range of the Present does overlap with the functional ranges of the Imperfect, Aorist, and Perfect/Pluperfect to some extent, it nevertheless does not do so to nearly the same degree as these three forms do among themselves.

9. Present tenses tend to have progressive or continuous-state uses even where their past-tense counterparts do not, as in Early Modern English, which regularly uses its simple Present form in progressive contexts (e.g., “What do you read, my lord?” (*Hamlet* II.ii)) (Rissanen 1999:221), while the Preterite tense, built to the same stem, most often refers to a complete or “bounded” (concentrative) past event in sequential narration (*ibid.*:224). Similarly, the indicative Present in Sanskrit regularly has progressive or continuous-state interpretations (E. Dahl 2010:163–165), despite the fact that its corresponding past tense, the Imperfect, which is built to the same morphological stem, does not (Whitney 1889:201, 278). In some languages present tenses to stems that are distinctly *not* imperfective grams can be used to indicate imperfective aspect in the *past* in narrative contexts, as seems to have been the case in Middle English, where the simple Present tense was used to fill the functional gap of “past imperfective,” since the periphrastic Progressive construction (BE + *-ing*) had yet to fully grammaticalize (Fischer 1992:244–245). If non-imperfective present-tense forms can be put into service to designate imperfective aspect, then there must be something about the *tense* meaning of the present (rather than aspect) that is functionally “close enough” to the imperfective aspect so as to allow it to substitute for a genuine imperfective gram when a language lacks a better alternative.

formative as regards verbal usage. In addition, in the *Ṛgveda* the Perfect is “a moving target,” as Jamison (2014:158) puts it, making it difficult to “construct a stable, shared functional niche” for Vedic Perfects to the same extent that one can for the other forms. This is not to say the Perfect is uninteresting or that it is futile to try to track its functional development based on its usage in the *Ṛgveda*. But such a task deserves its own treatment, and requires, inevitably, consideration of the many open questions concerning the origin of the Perfect in Indo-European, its relation to the middle voice, the status of its “stative” value, and so on. Nonetheless, although I have chosen to defer its systematic treatment to future research, I make reference to it wherever relevant and try to give a sense of its place within the verb systems of Homer and the *Ṛgveda* insofar as it interacts with the Aorist and Imperfect. To this end, I append to each major part of the dissertation a brief treatment of the Perfect and Pluperfect/Perfect injunctive in Homeric and *Ṛgvedic*, which can be found in Chapters 7 and 11 respectively.

In Homeric the Perfect represents a “stative-resultative” gram type (on this term see §2.1 below), which shares at least two uses (stative and resultative) with the Aorist and thus competes with it in at least some contexts. Further, the Pluperfect, in its expression of states ongoing in the past, shares at least one reading in common with the Imperfect (in fact it shares many). The Perfect and Pluperfect are thus included in this investigation because they show clear interaction with the aspectual system of the other past-referring categories of Ancient Greek, namely the Aorist and Imperfect, competing with these in some uses but also having several uses for which they are the preferred means of expression (e.g., experiential perfect).

All three of these functional categories—Aorist, Perfect, and Imperfect—belong to the same cross-linguistic “grammaticalization pathway,” shown (6), whereby stative-resultatives tend to become perfects, and perfects tend to become perfectives or simple pasts over time (see further §2.1 below).

(6) stative-resultative » perfect » emergent perfective » perfective, simple past

In contrast to Homer, the *Ṛgvedic* Perfect, insofar as it is a unified category in the *Ṛgveda*, is plainly undergoing (and has largely already undergone) “fairly rapid change” along this pathway, from its presumed original “stative” value “to the narrative preterite function that [it] settles

down into in late Vedic” (Jamison 2014:158). This means that the extent of interaction and competition of usage between the Perfect and the other two functional categories is even greater in the *R̥gveda* than it is in Homer, as all three categories are beginning to compete for the same semantic “space,” and in the post-Vedic period all three “are so many undiscriminated past tenses or preterits,” serving more or less the same preterital function (Whitney 1889:201). I therefore include somewhat more extensive reference to the Perfect in my discussion of the Vedic categories (Chapter 11) than I do in my treatment of Homer (Chapter 7).

As for the non-indicative forms of the verb (i.e., modal, participial, and infinitival forms), these are set aside for the purposes of the present investigation not because they do not show aspectual contrasts (though they probably do not in Vedic), but because these contrasts are far more difficult to form reliable philological judgments about. In the imperative mood, for instance, it is often impossible to feel confident in one’s understanding of why an author has chosen to use the Aorist or the Present stem on any given occasion, such that any claims that might be made about them would be unreliable at best and virtually unfalsifiable. Given that philological judgments are difficult enough in the relatively clear domain of the indicative, it seems best to defer study of the modal and non-finite forms until the indicative and injunctive are reasonably well understood. The indicative and the injunctive (which regularly has indicatival uses) thus seem to be the categories about which I can speak with the highest degree of confidence for the time being. Hence, I limit myself here to the Aorist indicative/injunctive, the Imperfect/Present injunctive, and (to a lesser extent) the Perfect and Pluperfect/Perfect injunctive.

1.3 Evidence and its assessment: The usage-based approach

The evidence for the claims of this study is taken to be all the readings available to each of the functional categories under investigation: Aorist indicative/injunctive, Imperfect/Present injunctive, and Perfect indicative/injunctive/Pluperfect. In each chapter, I present this evidence in tabular form, then discuss the evidence for each reading in turn. The readings are based, of course, on attestations in the primary texts, as well as on reliable grammatical treatments (such

as Kühner–Gerth, Schwyzer & Debrunner 1950, Whitney 1889, and Hoffmann 1967), which can be followed up by interested readers for further examples and discussion of particular usages. I provide examples of each reading assumed for each functional category in each language, as well as references to grammatical treatments containing further examples and discussion.

The division of usage into readings is necessarily somewhat arbitrary, of course, but I have aimed to give all the major readings that are commonly found in handbook treatments of Greek and Vedic grammar, supplemented and refined by treatments in the linguistic literature. I have tried to make note of any significant departures from prior research, such as treating the recent past as a special case of the resultative reading, or the conative as a special case of the progressive. I have also had to make some decisions about what to call certain readings, which have a wide variety of labels in the literature, most especially what I call “complexive” and “concentrative.” I aim in my choice of labels for transparency of meaning, insofar as that is possible, though I yield to the standard labels wherever they are firmly established, even if these are not particularly transparent (e.g., “experiential” or “intensive-frequentative”). In all cases, I explain my reasoning for adopting non-standard terminology in footnotes or the main text and define each reading in terms of temporal relations between assertion time and eventuality time (see §2.2 below), such that the precise meaning can be understood, even if the chosen label is found to be deficient. Note that the readings here presented are not necessarily mutually exclusive. For instance, an experiential perfect reading may at the same time be iterative (of the type *I have read that book many times*), and so forth.

For all usage labels (e.g., *resultative*, *inceptive*, etc.), I attempt to give an accurate sense of how well or poorly attested each reading is for each form and any variability that might exist within the text. Where there is a possible but unlikely example of a given use of some form, I present it with discussion of why its validity is in doubt. In addition to this general sense of frequency or scarcity, I also give precise figures for the occurrence of each reading in my two tagged corpora (*Iliad* 1 and *RV* II). The collection and treatment of the quantitative data is discussed in Section 1.5 below.

It bears emphasizing that readings are fundamentally sensitive to both discourse context and the actionality (also called “Aktionsart” or “lexical aspect”) of the lexical item or predi-

cate combined with a particular functional category.¹⁰ To clarify, the notion of a “reading” (also “use,” “function,” “interpretation,” “sense,” “nuance,” or “(functional) value”) is defined in (7).

(7) DEFINITION OF A “READING” OF A VERB

Some interpretation within the semantic range of a particular morphological form that is available in certain contexts and/or with certain kinds of predicates or situation types. In other words, the semantic contribution (or “notional content”) of a particular functional category (for our purposes, the Aorist indicative/injunctive, Imperfect/Present injunctive, or Perfect indicative/injunctive/Pluperfect) determines what sorts of contexts that form will be felicitous in and, therefore, what sorts of readings it can have. Accordingly, not only should one not expect every reading to be possible for every morphological category, but one should also not expect to find every reading available in all contexts or to all predicate types. Certain contexts license certain readings. For example, a verb meaning ‘they ran away’ in the context after a participle meaning ‘having gotten scared’ is likely to receive an inceptive interpretation: ‘having gotten scared, they ran away (i.e., took off running)’. This is a contextually determined reading of a form whose semantic range is sufficiently broad to allow it to occur in such contexts (viz. inceptive). If its semantics did not allow inceptive as a use, we would expect it to be ungrammatical in such contexts and therefore not to occur in them, or else to be coerced into some special interpretation in order to produce a grammatical utterance.

Similarly, many readings are sensitive to situation/predicate type, such that only certain types of verbs or predicates can yield certain readings in combination with a given morphological form. For example, the stative use of the Aorist in Homeric Greek arises when the Aorist morphology is combined with a verbal predicate that is a state, such as φιλέω ‘love’ (see §4.1 below). The inceptive and (to the extent that it exists) complexive readings of the Homeric Aorist are likewise only available to state predicates. This is not true, however, for some of the analogous readings of the Imperfect: While the continuous-state reading of the Imperfect does require a state predicate (type ‘he was sleeping’), just like the stative use of the Aorist, in its complexive and inceptive uses the Imperfect attests predicates of all types (mainly activities, accomplishments, and states, in Vendlerian terms, see §2.2.4 below), in contrast to the Aorist usage.

10. On the notion of actionality see Section 2.2 below.

Restriction of a certain reading to a certain situation/predicate type is thus in part a property of the morphological category that the lexical verb or verbal predicate combines with and, in this way, reveals something about the semantic range of that category. This kind of evidence has been indispensable in determining the denotations of the various functional categories in each language. I therefore include information about the Vendlerian categories (enclosed in curly braces) that license particular readings of functional categories in the summary tables of Chapters 4, 5, 9, and 10.

The total set of uses regularly available to a particular functional category indicates its *functional range* (or semantic range), which must be permissible under the semantic denotation associated with that form. The functional range for a given form is thus discerned on the basis of what readings we find actually attested for that form. Any sufficient formalization of the denotation of a given form must capture exactly this functional range and be neither too “weak” nor too “strong” as to permit more or fewer readings for that form than are actually available to it. However, *available* does not necessarily mean realized. There are pragmatic factors that can restrict the application of a form in certain contexts, such as competition with other forms in the verb system for use in that context. Forms that are more specialized for a particular meaning tend to block the application of forms that have “weaker” (broader) semantics. Because of this, the interpretations that are compatible with a certain denotation are not necessarily all realized with the same frequency; some may be relatively infrequent, and some may be categorically blocked by another form. Yet scarcity of occurrence does not necessarily mean that a particular usage is irregular (see further in §1.8 below).

Because it is the total set of regularly attested readings that determines a form’s functional range, no particular function is regarded as more important or “central” to establishing the form’s denotation than any other. This approach contrasts strongly with the assumptions of many standard grammatical treatments and even prior theoretical treatments. See, e.g., Chantraine’s (1953 [2015]:220) notion that the Greek Imperfect and Present indicative express basically “duration,” or Smyth’s (1956:423) generalization that the Imperfect “represents an action as still going on... in the past”. More recently, Bary & Egg (2012) take an extreme approach of this kind in assuming that there is one particular reading that is essential to the Greek Aorist

(viz. concentrative, of the type ‘received in that moment’), and one that is essential to the Imperfect (viz. past continuous state, of the type ‘was king at that time’), and that all others must be explained by means of various “coercion operators.” These “coerced” readings include, remarkably, the inceptive (“ingressive”) and complexive (“phase interpretation”) interpretations of the Aorist and the progressive, iterative, and habitual uses of the Imperfect.¹¹ In contrast to these approaches, I assume instead that all regular uses of a form operate essentially on the same “footing,” so to speak. Accordingly, a form’s denotation must be formulated in such a way as to accommodate *all* of its regular functions, rather than just one or another reading that receives some special status in the (inevitably arbitrary) view of the analyst. In conducting my analysis in this way, I hope to have avoided undue confirmation bias and, above all, to have hit as near the mark as possible in understanding the full functional range of the forms in each language on the basis of their attested usage.

1.4 The role of translation

In the examples cited throughout this dissertation I rely on English translation to make my interpretation of the relevant form as clear as possible. However, translation is relevant only insofar as it accomplishes this aim. The translations should not be taken to be the only way of rendering the relevant passage into English, and in most cases other translations are possible, or even preferable for smooth idiomatic English. For instance, in all cases where I deem a form to have a “perfect-like” function, I translate it with the English *have*-Perfect to make my interpretation of the text clear. But very often English—and especially American English—may use a Preterite in “perfect-like” functions.¹² The fact that one *can* use the Preterite in English instead of the Perfect tells us nothing about the interpretation of the Greek or Sanskrit form;

11. Napoli’s (2006:64) conclusion that the Imperfect (and Present stem generally) “views the internal structure of the situation” is much closer in spirit to the approach of this dissertation, though I think her identification of this functional category with imperfective aspect assigns to it a semantics too narrow (or “strong”) to account for all the uses of the imperfect that we find attested in Homer.

12. Cf. American English *Help, I’ve fallen and I can’t get up!* beside the equally felicitous *Help, I fell and I can’t get up!* See also the variants commonly found in notifications regarding the sending of emails or packages: *Your message/package has been sent* vs. *Your message/package was sent*.

rather, it simply tells us that the English Preterite is vague in this respect, being compatible with both past-terminative and “perfect-like” interpretations (on these terms see §§2.3 and 2.4 below). Because the English Preterite is a simple past gram, and thus neutral in aspect, its use in translation is largely uninformative for determining what kinds of aspectual interpretations are available to a form in Greek or Sanskrit. On the other hand, the ability to use the *have*-Perfect in translating a particular passage *is* informative, since the English Perfect is restricted in its application to only “perfect-like” functions. Accordingly, if a form in Greek or Sanskrit can be felicitously rendered into English using the *have*-Perfect we may (in the absence of other considerations) conclude that that form is compatible with “perfect-like” interpretations. Reasoning of this kind has been applied throughout in my analysis of the texts and their implications for the meaning of functional categories (cf. nn.26 and 98 below).

1.5 Corpora and data collection

1.5.1 Corpus annotation in XML

In addition to a survey of usage in Homer and the *R̥gveda* generally, I also include data for every Imperfect, Aorist, Perfect, and Pluperfect in the first book of the *Iliad* and every Imperfect, Present injunctive, Aorist indicative/injunctive, and Perfect indicative/injunctive and Pluperfect in the second Maṇḍala of the *R̥gveda*. After carefully examining each verb to determine its most likely interpretation in the context in which it occurs in the text, I coded this information in XML (Extensible Markup Language). I thus produced [two fully annotated corpora](#), in which each verb is tagged for one of a set of predefined usage labels, such as *terminative*, *progressive*, etc.¹³ These usage labels correspond to attributes in the XML corpora, which are assigned shorthand names like *term*, *prog*, and so on. When, in my examination of the text, I determined that a particular verb had a particular interpretation, I assigned it a positive value for the relevant attribute. Thus, an Aorist determined to be used in past sequential narration received

13. Access to these data sets is freely available at the following link, along with a key to the meanings of all attributes and abbreviations: https://drive.google.com/drive/folders/17h7MWnhuIHhCTDyHVVH2lObWyKt92_z02?usp=sharing.

a positive value for the attribute *conc* (i.e., concentrative) and for *term* (i.e., terminative) (on these terms, see §2.4 below). Each entry was also coded for various other relevant information, such as tense, stem class, root/lemma, actionality (Aktionsarten), the presence or absence of preverbs, and so on. I provide an example of entries in each corpus in (8). Values of "1" mean that an attribute is true, values "0" that it is false.

(8) EXAMPLES OF XML ENTRIES IN *ILIAD* 1 (a) AND *ṚGVEDA* II (b)

- a. <Verb line="1.96" lemma="ῑῑῑῑῑ" pv="0" gloss="give, bestow, hand over" trans="has given" altr="has been giving" tense="Aor" stem="root-k" time="past" parse="3sg.act.ind." transtv="1" io="0" agntv="1" aug="1" met="0" rsltv="1" recent="1" ant="0" term="0" univ="1?" plur="0" iter="0" COS="1" transfm="1" akt="achievement" telic="1" quot="1" conj="ind.fut" nu="1" adv="τοῦνεχα; ῑῑῑ ῑῑῑ ῑῑῑῑῑ">ῑῑῑῑῑ</Verb>
- b. <Verb pada="II.24.5b" root="vr" pv="0" gloss="cover" trans="kept blocked, kept shut" dub="1" altr="had kept shut, had been blocking, were blocking" tense="Pres" alttense="Aor" stem="P1" altstem="root Aor" time="past" parse="3pl.mid.inj." altparse="3pl.mid.sjv." transtv="1" agntv="1" aug="0" term="1" stv="1" plx="1" conc="0" rsltv="0" ant="0" plu="0" ipfv="0" prog="0" mod="0" sjv="0" COS="0" transfm="0" akt="state/achievement" telic="0" adv="mādbhīḥ śarādbhir">varanta</Verb>

Because XML is a maximally rich annotation format, I was able to include all information relevant to the assessment of a verb's function in its context. This includes whether or not there are any adverbs (*adv*) to help guide my interpretation of the verb, as well as any relevant discourse considerations, such as whether the verb occurs in a dependent or a main clause, whether it is in narrative or quoted speech, what sorts of verbs it is coordinated with, and so on. Some of these can be seen in (8a), where *quot*="1" means that the verb occurs in (non-narrative) quoted speech, and *conj*="ind.fut" means it is coordinated with a Future indica-

tive, namely δώσει ‘he will give’ in the same line.

However, due to the fact that readings—and even morphological affiliation—are often uncertain in these texts, I also encoded any uncertainty into the corpora as well. This is done in several ways. First, any reasonable alternative translations are noted by the attribute `altr`, as can be seen in (8a), which contains `altr="has been giving"`. This is opposed to the translation I have deemed most appropriate to the form’s function in context (`trans="has given"`), which corresponds to the functional label it has been assigned, in this case resultative (`rsltv="1"`). Any entry containing an `altr` attribute is not considered to be securely interpreted. Second, I use the attribute `dub` for especially dubious cases, as can be seen in (8b). Irrespective of anything else, a positive value for this attribute means that the entry is not securely interpreted. Lastly, it is sometimes the case that the morphological affiliation or parse of a form cannot be determined with certainty. In such cases, I use the attributes `altparse` and `alttense`, both of which are found in (8b). This means that, though I favor the interpretation of *varanta* as a Present injunctive (`tense="Pres"` and `parse="3pl.mid.inj."`), following Whitney (1885:162) and Grassmann (1873:s.v.), it is possible that it is an Aorist (as, e.g., Kümmel (2021–) takes it), hence the attribute `alttense="Aor"`. Further, given the ending *-anta* (cf. Hoffmann 1967:257–8), *varanta* may be taken to be a subjunctive (`altparse="3pl.mid.sjv."`) rather than an injunctive (`parse="3pl.mid.inj."`). Having any one of these attributes means that a form is not considered to be securely interpreted.

Once the two corpora had been fully tagged in this way, the data could then be queried for various information, for which I used XQuery. This enabled me to determine, for example, how often the Aorist has a resultative reading in *Iliad* I (based on my interpretations) by querying the corpus for Aorists that have a positive value ("1") for the attribute `rsltv` (i.e., resultative). I could additionally ascertain how many of these are augmented by adding a stipulation that the attribute `aug` (i.e., augmented) have a positive value as well. Crucially, I was able to query for raw values as well as those which have secure interpretations and/or secure augments (or lack of augment). I report this information wherever relevant in the chapters that follow.

1.5.2 Citing frequency data and security of interpretation

When citing frequency data, I give the total number of occurrences of a reading by my assessment. Yet there are, of course, a large number of examples that could admit of alternative interpretations. For this reason, after citing the total number of occurrences of a particular use that I consider likely, I also cite the number of cases that do not seem to admit easily of alternative interpretations. For example, if there are 56 cases of a particular reading but 14 readily admit of alternative readings (or parses), I will cite the figure as: “56, 42 secure” (or “securely interpreted”). Here, “secure” should be taken to mean ‘lacking clear alternative readings or parses’. NB: It should not be confused with metrically “secure” (or “assured”) augmentation, for which I also give frequency data throughout. I round all percentages to the nearest integer, unless it is less than one percent, in which case I round to the nearest tenth of a percent.

In addition to interpretive difficulties, it is not always clear what morphological category a given form belongs to. It is often uncertain whether a form should be considered an Aorist or an Imperfect, a subjunctive or imperative or injunctive, and so on. Any one of these factors can cause the interpretation of a form to be considered insecure. So, by “securely interpreted” I mean that the form in question securely belongs to the relevant functional category (e.g., Aorist indicative/injunctive), has (in my view) no reasonable alternative interpretations, and its interpretation is not especially doubtful (again in my view). In terms of querying the XML data, this has meant excluding items tagged as dub (i.e., dubious), those with reasonable alternative translations (altr), and those with alternative parsing possibilities (altparse) and/or alternative tense possibilities (alttense). If, and only if, a form has none of these attributes is it considered to be securely interpreted.

1.5.3 Secure augmentation

Occurrences of the augment or lack of augment are not always certain. In Homer, this is because the metrical position of the augmented word could easily accommodate an alternative reading, and often the transmitted text has variants. For instance, the conjunction δέ ‘and’ regularly takes the form δ̣ when it precedes a vowel. It thus is often impossible to tell whether a

verb following this conjunction is augmented or not. So, for example, augmented $\delta' \epsilon\pi\acute{\iota}\theta\omicron\nu\tau\omicron$ ‘and they obeyed’ may alternatively be read as augmentless $\delta\epsilon \pi\acute{\iota}\theta\omicron\nu\tau\omicron$, without affecting the meter. For this reason, when discussing the usage of the augment in Homer I only consider the metrically assured cases, following the practice of scholars like Drewitt (1912) and Bakker (2005).

In the *Ṛgveda* the augment or its absence is also frequently in doubt, but for different reasons. Here, sandhi rules are typically at work to obscure the presence or absence of an augment. While the Padapāṭha can act as a guide, its readings are by no means certain, and I read an augmented or injunctive form despite the Padapāṭha wherever there is good reason to do so. Still, secure augments (and secure injunctives) in the *Ṛgveda* are those that are not obscured by sandhi or made doubtful by metrical position, and I make reference to these in my presentation of my corpus data.

In the Homeric corpus, an augment is said to be “securely read” or “metrically assured” iff it has a positive value (=“1”) for the attribute *aug* (i.e., augmented) and a positive value for the attribute *met* (i.e., metrically guaranteed). Conversely, lack of augment is assured iff *aug* equals “0” and *met* equals “1”.

In the *Ṛgvedic* corpus, an augment is said to be “securely read” iff it does not have a positive value (=“1”) for the attribute *qaug* (i.e., questionable augment). An injunctive is said to be secure iff it does not have a positive value for the attribute *qinj* (i.e., questionable injunctive). Based on a variety of considerations, I have assigned positive values to the attributes *qaug* or *qinj* wherever relevant, often despite what is transmitted in the Padapāṭha. Where my reading disagrees with the Padapāṭha, one of the attributes *qaug* or *qinj* is always given a positive value. The decision of which attribute to use (*qaug* or *qinj*) is often guided by the reading given in the Padapāṭha, though it can also be informed by my own view of which possibility is more likely in the context. Where the injunctive reading is more likely for either of these reasons the label *qinj* is used; where the augmented reading is more likely the label *qaug* is used.

1.6 Assessment and interpretation of forms in context

As the purpose of my investigation is to discover what readings are available to each morphological category (Aorist, Imperfect, etc.), I have aimed to assess the meaning of each occurrence of a verb independent of any preconceptions about the morphological category to which it belongs. I have thus sought to base my interpretation of each verb solely on its use in the context of its occurrence. However, this is often difficult to determine on the basis of the texts, such as they are, and deciding on a particular interpretation has required a variety of interpretive strategies, relying on context cues, discourse type, and study of how a verb form belonging to a particular lexical item behaves across contexts. For instance, when presented with the verb ἵκτανεν ‘reached’ in a context in which it is difficult to decide on its interpretation, it is useful to know that it has past-terminative interpretations (\approx “perfective-like” interpretations, see §2.4 below) nearly 50 times in Homer, along with at least 18 counter-sequential uses, two iterative-pluractional uses, and one secure progressive use. While there is no guarantee, the fact that the terminative-concentrative use is so frequent and its progressive use so rare makes it more likely that ἵκτανεν in *Il.* 1.431 (see (77) below) should be interpreted as ‘reached, drew near’ (so *BK*:148 “konfektiv”) rather than ‘was drawing near’ (as, e.g., Alexander (2015:15) translates it). Getting a sense of a form’s functional profile within the text at large has thus aided me on a number of occasions in settling on an interpretation. Still, doubt in the reading of a particular passage is always taken into account in my analysis and noted in my presentation of the material.

In deciding on a particular reading, I make use of relevant adverbs and adverbial phrases wherever they occur, especially temporal adverbs meaning ‘now’, ‘(ever) before’, ‘at this/that time’, ‘for such-and-such amount of time’, and temporal clauses or participles. However, such interpretive aids are lacking for many examples. In such cases, the larger context has to be considered. This includes discourse context, such as coordinated or nearby verbs that suggest a particular time reference with minimal ambiguity. It also includes textual considerations, such as what type of Ṛgvedic hymn or group of hymns a particular verb finds itself in. Dawn hymns, for example, always describe the sun as having just risen, so an Aorist occurring in such a hymn is especially likely to be resultative (“perfect-like”). In Homer, an important consideration is

whether a verb occurs in dialogue or narration, as this has consequences for its time reference and interpretation. Syntactic context is often relevant as well. For instance an Aorist that occurs in a subordinate clause dependent on a past tense verb in the main clause is often counter-sequential (past shifted). Further, it is useful to know what other forms compete with the form in question for the target meaning, and whether there are any lexical or paradigmatic constraints on what stem forms a verb is capable of building. Finally, metrical position is also taken into account, as well as any variant lines that exist elsewhere in the text, which helps in identifying whether a form is being used in place of another form due to metrical considerations, as in the case of (63) in Section 5.3 below (q.v.). In the end, however, final decisions come down to philological judgments. Nonetheless, I do not make these judgments on my own: I have consulted multiple translations for each text, as well as the tense-aspect literature for relevant passages or other commentary, especially Jamison's (2015–) online *Rigveda Translation: Commentary* for the *Ṛgveda*. In addition, I have worked closely with my mentors in interpreting these texts, especially Prof. Jamison for the *Ṛgvedic* material. The final interpretations here presented, however, are entirely my own and may or may not align with the views of my mentors.

The texts of Homer consist mainly of narrative and dialogue, and it is mostly clear what actions and events are referred to in the texts. While the subtle nuances of verbal usage in Homer remain difficult to assess, these are far outmatched by data of the *Ṛgveda*, a text which poses special interpretive difficulties. Unlike Homer, the *Ṛgveda* is a collection of hymns whose subject matter is often unclear or unknown. There is seldom narration or dialogue *per se*, and, as any reader of the *Ṛgveda* will be aware, it is often impossible to determine with any confidence the exact reading of a particular instance of a verb in its context, precisely because the context is seldom very clearly understood (see E. Dahl 2010:1–4 for discussion of the many reasons for these difficulties). As a consequence, multiple readings are usually possible for any given occurrence of a verb. These issues are most prevalent when the finite verb is injunctive, where the ambiguity lies in deciding whether to interpret the form as having one of several modal readings or one of the readings of the indicative, which I call “indicative” readings, all of which are available to the injunctive (see Kiparsky 2005 for details). A reading of the Present, Aorist, or Perfect injunctive is considered to be indicative if it can be expressed by the Imperfect, Aorist,

or Perfect/Pluperfect indicative respectively, as determined by textual attestations. All others are taken to be modal, including the gnomic uses of the injunctive, with the exception of the performative-reportive uses, which are treated on their own (see §9.2 below).

Relevant here is the statement of Avery (1885:330) concerning the reliability of his interpretations of Ṛgvedic verbs:

Of course I do not expect that everyone will accept my understanding of each of the more than twenty-five hundred cases under consideration; but I trust that the difference of opinion will not be so great as to prevent substantial agreement in the results. At any rate, the whole material is spread before the reader, and he can modify the conclusions to suit his own views.

I likewise assume that interpretive difficulties inherent to the texts of Homer and the *Ṛgveda* are not an insurmountable obstacle to quantifying their verbal usage. Given enough data, systematic trends emerge which speak louder than any individual philological objections that may be raised about one passage or another. This indeed is the benefit (and necessity) of looking at so much data, allowing us to compensate, to the extent possible, for the limitations of analyzing usage on a case-by-case basis alone.

Of principal concern has been giving actual numbers to the statements of the Sanskrit grammarians (e.g., Whitney 1889:201, 278, 329; Wackernagel 1926–8 [2009]:227, 235; Delbrück 1897:280–1, etc.) that “most” or “very many” Aorists have “perfect-like” readings and confirming statements by the same grammarians that the Imperfect is always or nearly always a “narrative” past and typically not imperfective in meaning. Where difficulties arise, say, in deciding between “perfect-like” and past-terminative readings of the Aorist, I in every case side with the past terminative. Note that this “default” runs contrary to the traditional assertions of the grammars but is in line with the assumption that the Aorist was a perfective in PNIE or even into the *Ṛgveda* (E. Dahl 2010:341). Since it is precisely this view that my analysis argues against, it makes sense to side with the “perfective hypothesis” in dubious cases, so as to avoid undue bias on my part to the extent possible. Though some Aorists thus placed in the “terminative” category might conceivably be interpreted as “perfect-like,” there do exist an undeniable number of

past-terminative Aorists in the *Ṛgveda*, which must be taken into consideration in any semantic analysis of this form. Likewise, for Homer, I have in cases of doubt sided with the traditional hypothesis and assumed that Aorists are past terminative and Imperfects are past imperfective in the absence of a good reason to suppose otherwise. Despite these “priors,” I find that in the majority of cases the usage of the functional categories in these languages is out of step with traditional assumptions about IE tense–aspect.

1.7 Presentation of textual citations

In my quotation of examples I put the relevant verb(s) and its translation in bold. I use underlining for any other relevant information, particularly that which helps to decide on the interpretation of the bolded verb(s). I provide morphological identifications in subscript in square brackets. I have aimed to provide sufficient context for these examples so that the motivations for my interpretations are clear to the reader, though of course considerations of space have limited the amount of context that could actually be provided. It is hoped that any cases about which the reader has doubt will be followed up in their fuller context in the texts.

For the *Ṛgvedic* examples I have in general used the translations of Jamison & Brereton (2014) (cf. n.6 above). In many cases, however, it has been necessary to diverge from these translations, though for the most part only slightly. In such cases I write “tr. adapted from Jamison & Brereton 2014.” When a translation is more loosely based on that found in Jamison & Brereton 2014 or any other translation, I write “tr. after” before the reference to the translation. Often these arise when considering the many updates found in Jamison 2015–. In the citations of the text of the *Ṛgveda* I often undo the application sandhi, in order to more clearly show the division of relevant words. For Homer, the translations are my own unless otherwise noted. For the Greek text I follow West’s (1998–2000, 2017) editions of the *Iliad* and *Odyssey*, including his practice of writing Homeric forms with iota adscript (e.g., $\eta\iota$) rather than iota subscript (e.g., $\eta\iota$).

1.8 The notions of regularity and blocking

In the main chapters on the Aorist and Imperfect/Present injunctive in Homeric and R̥gvedic, I summarize the readings available to each of the three functional categories in each language, based on my investigation of the data. The point is to determine the *regular* functional range of each category in each language, so that I can then assign to it a semantics, called a “denotation,” that accounts for this functional range. This helps account for the observed usage and facilitates the comparison of the functional categories of Greek and Vedic.

I distinguish in this treatment the notion of regularity of usage from that of commonality or frequency of usage. Crucially, just because a usage is regular does not mean that it will occur frequently, though high frequency of occurrence can ordinarily be taken to imply regularity. This is because there are many cases in which one would consider a certain usage to be part of a form’s regular functional range and yet find that it occurs with less frequency than other uses regularly available to that form. For instance, the inceptive use of the Greek Imperfect is certainly of rarer occurrence than some of its other uses (e.g., concentrative-sequential), simply because the kinds of discourse contexts that elicit the inceptive reading tend to be more specific than for the other uses, typically requiring that something has just occurred in the immediate discourse which leads to the initiation of a related action in the Imperfect (cf. Rijksbaron 2002:17–18). Yet, if the inceptive use occurs less frequently than other readings of the Imperfect, still it is met with on nearly every page of, say, Herodotus or Thucydides (Classical Greek authors), and good examples of it are, in my experience, much easier to come by than truly solid examples of the Imperfect’s progressive use, which most assume to be fundamental to the meaning of the Imperfect (e.g., Smyth 1956:423). Therefore, ordering readings on a sliding scale of frequency of occurrence is problematic at best, and it is futile to attempt to determine at what critical threshold one should consider a usage “legitimate” or “illegitimate.”

Partly to avoid the problems brought on by notions of relative frequency, I have instead attempted only to determine what usage is *regular* for a form in each language. By “regularity of usage” I mean something similar to the notion of regularity met with in other areas of linguistics, such as regularity of sound change. This has two properties of interest to us here: (i) A

regular sound law may or may not actually apply to very many forms, so long as (ii) it applies everywhere it *can* apply. Any historical linguist will be familiar with regular sound laws that are used to explain only a handful of data (or sometimes even a single form, so long as no counterexamples exist). So with regularity of usage, a form may be regular without being frequent.

There are a number of factors that contribute to relative frequencies, such as the kinds of discourse contexts that give rise to particular readings (just discussed) and, most tellingly, categorical or partial *blocking*. Just as a regular sound law applies wherever it can but may be blocked (or “bled”) from applying by some other rule that precedes it, so, analogously, a regular synchronic usage of a form will apply in every context that it can, though its application may meet with interference due to competition with another form in the same function. Given this assumption, it follows that, when two forms compete for the same semantic “space,” the semantically stronger form will apply in those cases where its particular functional range is most appropriate, not because the other form cannot express that nuance, but because the more specific form applies in all instances that it can. Since the more specific form applies in a subset of the contexts that the less specific form does, it will block the application of the less specific form in exactly those contexts.

To take a lexical example from English, a word like *wear* may be used to mean ‘have (clothes) on’ or, under certain circumstances, ‘put (clothes) on’. This is taken to imply that the denotation of *wear* is broad enough to accommodate either interpretation, even if it is most typically used in only one of these functions (viz. ‘have on’). The reverse, however, is not true: The phrase *put on* cannot be used to mean ‘have on’. The denotation of *put on* can thus be said to be more specific than that of *wear*, in that *put on* does not admit of alternative interpretations of the relevant type under any circumstances, whereas *wear* does. In addition, the phrase *put on* can be said to block the application of the word *wear* under normal circumstances, such that *wear* typically means ‘have on’ rather than ‘put on’. The relation of *wear* to *put on* is analogous to the interaction of tense–aspect categories having “stronger” and “weaker” semantics, some used in certain specialized contexts, some applying more generally but blocked from applying in specific contexts by forms more specialized for those contexts.

Whether blocking is partial or categorical depends on numerous other factors of the partic-

ular verb system, but either variety can be overridden by lexical or other considerations. For example, the English Preterite cannot have past progressive interpretations. Yet it would be rash to conclude on this basis that the Preterite is *semantically* incapable of expressing these shades of meaning. On the contrary, the English Preterite is generally regarded as a simple past gram (e.g., Bybee et al. 1994:85; Denison 1998:133), neutral in aspect, which we know in earlier forms of the language—when the Progressive construction was not fully grammaticalized—was used to characterize states of affairs as complete *or* incomplete in the past (Fischer 1992:245–246; Risänen 1999:226; see n.192 below for examples). Further, even in Present-day English the simple Preterite is typically used and even required for certain state predicates characterized as ongoing in the past, where the Progressive is impossible, as in *She knew (*was knowing) the answer*. It is thus inaccurate to say that the English Preterite does not regularly characterize states of affairs as incomplete or ongoing in the past. Rather, the event-in-progress readings that *could* apply to the Preterite (and used to do so) are categorically blocked in Present-day English by the Progressive construction (cf. Deo 2015b:5), which applies in all contexts where it can apply, in preference to the semantically more general Preterite (simple past gram). Such is the effect of blocking that readings which are well within the semantic range of a form are not actually realized with complete freedom, since another form in the verb system that is more highly specialized for use in those contexts blocks the application of the more general form. Still, such readings may be realized by the more general form in a restricted domain, applying wherever the more specific form cannot, as in the case of state predicates in English that do not readily build Progressives, such as KNOW, where the Preterite is used instead. Thus, all regular uses of a functional category will apply in all contexts that they can apply in, though these contexts of application are often restricted by interaction with other forms in the verb system.

And so, I understand a reading or set of readings to be regular when it is *compatible with the denotation* of a particular morphological category in a given language. Empirically, a usage of a form is taken to be regular if: (a) it is very common and virtually unrestricted lexically, syntactically, or pragmatically; or (b) it is not very common or is even uncommon and of restricted occurrence, but the restrictions on its application are definable and predictable, whether in terms of lexicon (situation/predicate types), syntax, discourse context, or blocking relations

with other functional categories in the verb system (pragmatics). When there is no good reason to suppose that a usage that is marginal or completely lacking in secure attestation for a verb form comes by its scarcity due to regular pragmatic or other restrictions along the lines of (b), then the usage is considered not to be regular for that form.

It is possible for a usage to meet this definition of regularity but never actually be attested for a particular form, but crucially *only if* its lack of occurrence is regular and definable as the result of a blocking relation with another form in the verb system. Such is very nearly the case of the resultative-perfect use of the Imperfect in Homer, which has only a few plausible attestations. One way of analyzing its near absence could be to include a stipulation in its semantic denotation against applying this form in a resultative function. But since the Aorist is systematically applied in resultative contexts, the more economic approach is to view the lack of resultative uses of the Imperfect as due to blocking on the part of the Aorist in the appropriate contexts, rather than as an entailment inherent in the meaning of the Imperfect itself (cf. the categorical blocking of event-in-progress readings of the Preterite in English by the Progressive, discussed just above). This allows us to suppose that the Imperfect denoted “neutral aspect,” which can explain its extremely wide functional range, without stipulating more than is necessary or appropriate, since taking blocking into account gets this restriction, as it were, “for free,” while also rendering the few possible instances of resultative Imperfects in Homer semantically unproblematic.

By contrast, sporadic, unsystematic, and unpredictable uses are considered not to be regular. In such cases, no particular lexical restriction on the usage can be identified, no predictable syntactic or discursive environment can be pointed to as eliciting the reading across occurrences, and no regular blocking relation with another form in the verb system can be observed. There are some cases where an especially marginal or dubious reading of a form is found in a particular syntactic environment or discourse context, but, crucially, these environments or contexts cannot be generalized in order to *predict* where the form will occur when one looks at similar contexts in other utterances, because other forms are found there instead. Such cases must not be regarded as “regular” under the definition put forth here. An example of this is the English Perfect, which is ordinarily banned in contexts of definite past time deixis (the so-called

“present perfect puzzle”; cf. Klein 1994:208), as in **I have seen him at three o'clock yesterday*. Nonetheless, there are occasions in which one will hear or produce the Perfect in contexts of this kind, as I once did when writing an email to a professor, saying, “I have already taken Ling 200A last fall.” The use of the Perfect with definite time reference to the previous fall, added at the end, seems to have been triggered by a special set of circumstances at the discourse level: I wanted to make clear that I already had the prerequisite filled for the upcoming course (hence the experiential perfect) but also wished to specify when that prerequisite had been completed (hence the definite time adverbial). Yet we cannot use this one-off example to make reliable predictions about where the Perfect can and cannot occur in English, or even in my own idiolect of English. In fact, when we look at similar contexts in other utterances, we find the simple Preterite almost invariably (of the type *I took it last fall*). So it would be unreasonable to suppose that the denotation of the English Perfect is such that it regularly permits co-occurrence with adverbials of definite past deixis.

Still, such sporadic occurrences can, over time, lead to *changes* in regularity. In fact, it is thought that one of the mechanisms driving the grammaticalization of a perfect gram to a perfective or simple past is its over-application, extending into contexts where it could not previously be applied (cf. Deo 2015a:193). Eventually, this usage becomes part of the form's denotation and thus becomes semantically regular. In this way, sporadic, contextually or pragmatically motivated over-extension in usage can lead to systematic, regular usage at a later stage, and it is therefore essential to keep the two notions distinct to the extent possible. This concept will be relevant in what follows, as (e.g.) I deem the complexive use of the Aorist in Homeric Greek to be irregular, even though it *is* attested in a few cases, since its occurrence is in no way predictable on the basis of its possible attestations or on regular interactions of the Aorist with the verb system at large. Similarly, consider the marginal concentrative use of the Perfect in Homer (see §7), which need not—and probably should not—be considered regular. At the same time, however, I take these sporadic early occurrences as evidence of the type of over-extension of usage just described, which I assume led to the regularity of such uses in the later stages of the language: The complexive use of the Aorist and the concentrative use of the Perfect are clearly regular at the Classical and post-Classical stages of Greek (see Hollenbaugh 2021b), so it is unsurprising

that we should find an occurrence or two at an earlier stage (Homeric Greek), when these uses were first emerging.

I will sometimes refer to a usage as “typical” of a particular form. By this I mean that the use is frequent for that form relative to its other uses and that the form in question tends to apply in the kinds of contexts that elicit that interpretation as opposed to other forms that could conceivably be used there. For example, use in sequential narration is typical of the R̥gvedic Imperfect but not of the Aorist. Conversely, “perfect-like” interpretations are typical of the Aorist but atypical of the Imperfect. Nonetheless, both concentrative-sequential and “perfect-like” interpretations are regularly available to, and expressible by, both the Imperfect and the Aorist. A usage may thus be atypical without being irregular, since (as discussed above) a form’s denotation may be compatible with a particular reading, such that the reading is regular for that form, but the usage may only be realized under special circumstances. These special circumstances include occasions in which some meaning needs expression but the desired lexical item lacks the form typically associated with that meaning. For instance, the Ved. Ip̥f. *āyam* is sometimes used to mean ‘I have come’ rather than ‘I came’ (cf. §10.2 below). Due to the fact that the root \sqrt{i} ‘go’ does not build an Aorist stem (i.e., there is a gap in the paradigm of this lexical item), a speaker wishing to express a resultative-perfect meaning with this verb is compelled to use the Imperfect in the function more typically associated with the Aorist. Thus we have an atypical use surfacing in compensation for a paradigmatic gap.

However, I assume that such substitutions can only be made by forms for which the target meaning is regular (i.e., compatible with the denotation of the form). For this reason, we do not find forms substituting for other forms in meanings that are excluded by their denotations. For instance, a Future indicative cannot be used in place of, say, an Imperfect in past-terminative meaning. It is a basic assumption of this dissertation that forms with contextually salient interpretations must be semantically compatible with those interpretations. So, if a particular form is used in the context of past time, its denotation must not make such a usage impossible. As the denotation of the Future indicative is incompatible with past interpretation, it is not used in contexts of past reference. Crucially, this line of reasoning tells us that, where we do find the use of one form in a function more typical of another, the denotation of the substituted form

must be compatible with that function. In the analysis that follows I make use of the occurrence of such substitutions to help determine the functional ranges—and hence the denotations—of the forms under investigation.

1.9 The role of frequency data in explaining relative frequency of usage

While the notion of regularity allows us to determine the functional range of a form and assign it a denotation, these do not account for the relative frequency of a form's regular readings. To account for this, frequency data is essential. Relying on the tagged corpora as described above (§1.5), I report frequency data for each usage of each form. On this basis, I provide accounts of the relative scarcity of certain readings that I consider regular. Most of these explanations appeal to blocking of a reading by a competing form in that function. Other explanations involve lexical, paradigmatic, and discourse-level considerations, as described above. For instance, the Ṛgvedic Imperfect seems to be semantically compatible with progressive interpretations, yet these occur only a handful of times in my corpus, whereas others of its regular uses, such as the concentrative-sequential use, are abundant. I attribute the scarcity of the progressive use of the Imperfect to two factors: text type and blocking. Ṛgvedic hymns are not particularly suited to the kind of lively narration that typically calls for the “backgrounding” effect produced by past progressive meaning (of the type ‘While so-and-so was doing such-and-such, someone stabbed him’). When such contexts do arise, the typical way of expressing progressive meaning in the *Ṛgveda* seems to be with a (predicated) Present participle (see §10.5 below). Because the participle is specialized in the progressive use, it blocks the application of the Imperfect in this use. Thus, even as discerning a form's regular functional range requires teasing apart the pragmatic from the semantic (§1.8), explaining why some readings are more frequent than others requires pragmatic analysis.

1.10 Null hypothesis significance testing

I will make regular use of Fisher's exact test in my presentation of the data. Fisher's exact test is a statistical significance test used in the analysis of 2×2 contingency tables. It is especially useful for small sample sizes (as opposed to a chi-squared test, which is less accurate for small sample sizes). Yet it is valid for all sample sizes and, for the sake of consistency, I have relied on this test to calculate the p -values given throughout this dissertation. A p -value is the probability of obtaining test results at least as extreme as the results actually observed, under the assumption that the null hypothesis is correct. A very small p -value means that such an extreme observed outcome would be very unlikely under the null hypothesis (i.e., chance occurrence). Typically a p -value of 0.05 or 0.01 is adopted as the threshold for significance at or below which the null hypothesis is to be rejected. A score above such a threshold, however, does not mean that null hypothesis is correct, only that we cannot reject the null hypothesis on the basis of the results that we have. In this dissertation I take p -values of 0.05 or less to indicate significance, though the reader should be aware that a p -value of, say, 0.04 does not support rejecting the null hypothesis as strongly as would a p -value of 0.01 or less (this distinction is only directly relevant in n.35 below).

1.11 The IE language family and its proto-stages

Following a common practice (cf., e.g., Lundquist & Yates 2018:2080), I distinguish Proto-Indo-European (PIE) from Proto-Nuclear-Indo-European (PNIE). PIE is the highest node of the IE language family tree that can be reconstructed on the basis of the comparative method alone (i.e., excluding internal reconstruction), taking into consideration all known IE languages, including the Anatolian branch. PNIE is the language reconstructible on the basis of all IE languages except the Anatolian branch. PNIE is thus the ancestor of Greek, Indo-Iranian, Armenian, Italo-Celtic, Tocharian, and so on.

Where the precise reconstructed stage is not relevant, I will refer simply to "the proto-language." By this I mean simply the most immediate common ancestor that includes the Greek

and Indo-Iranian language families, though its precise location in the IE family tree is not necessarily relevant. This sense of “the proto-language” is used, for instance, in my discussion of the augment. The augment occurs in both Greek and Indo-Iranian and looks to be a shared innovation, rather than an independent development in each branch. If so, this points to a shared common ancestor of at least these two branches, which I refer to loosely as “the proto-language.” On this basis such a node must have included other branches as well, such as Armenian and Phrygian, which also have the augment, though these branches are not immediately relevant to the investigation at hand.

CHAPTER 2

Semantic theory and typology of tense and aspect

In this chapter I lay out the major theoretical preliminaries and fundamental information necessary for the investigation that follows. More specific details will be introduced as they become relevant in the main chapters of the dissertation, including more information about particular readings or usage labels as they pertain to the individual languages. I begin with an overview of relevant gram types and their grammaticalization over time (§2.1). I then introduce the four time intervals relevant to the semantics of tense and aspect (§2.2). In the remainder of the chapter I introduce the three main kinds of aspectual interpretations (also called “readings,” “functions,” “uses,” “senses,” “nuances,” or “values”) relevant to this study,¹⁴ namely the “perfect-like” interpretations (§2.3), the terminative interpretations (§2.4), which are most typically associated with perfective aspect, and the imperfective interpretations (§2.5). In the last of these, I also provide some necessary discussion of the cross-linguistic expression of imperfective (and perfective) aspect, how these categories are talked about in the linguistic literature, and how they can be categorized.

Though the various readings of tense–aspect categories often align with one gram type or another, they are in fact not *a priori* associated with any particular morphological category. However, on the basis of cross-linguistic tendencies we may categorize forms that have particular sets of functions into gram types. The way in which meanings are expressed in a language is thus crucial to deciding what gram type each functional category in that language belongs to. The notions of “imperfective aspect,” “perfective aspect,” “perfect aspect,” “neutral aspect,” etc., as specified by their respective denotations, may be taken to correspond roughly to Haspelmath’s (2010) notion of “comparative concepts,” whereby typological data is classified accord-

14. On the notion of “readings” see Section 1.3 above.

ing to certain pre-defined (idealistic) categories. By contrast, the “gram types” correspond to cross-linguistic categories (as in Bybee & Dahl 1989 and Ö. Dahl 2000:7) arrived at on the basis of observed cross-linguistic data, whereby “clusters” of (related or unrelated) languages showing similar behavior of their respective morphological categories can be said to possess the same “type” of morphological object (or “gram”). For each gram type thus identified, every gram belonging to it (i.e., across languages) will display a similar functional range (restricted to some observable threshold). I thus take an inclusive, “middle-way” approach to the ongoing debate about the validity of cross-linguistic categories vs. comparative concepts, as it does not seem to me that these are necessarily mutually exclusive.

2.1 Grams, gram types, and grammaticalization

The term “gram type” is used to refer to a morphological category that is cross-linguistically motivated. A “gram” is any instantiation of such a category in a language or languages, irrespective of what the form happens to be called in that language’s grammatical tradition. On these terms see Bybee & Dahl 1989 and Ö. Dahl 2000:7. As is conventional (since at least Comrie 1976), I capitalize the names assigned to tense–aspect categories within their own grammatical traditions (e.g., the “Imperfect of Greek”), while lower case is used for gram types and distributive reference to grams across languages (e.g., “the imperfectives in Romance”). I do not, however, generally capitalize modal or other functional categories, such as *subjunctive* or *causative*. Note that the traditional name for a functional category need not—and often does not—accurately reflect its meaning or usage.

By way of example, we may consider the Perfect in Latin. Though called “the Perfect,” it is in fact regularly used in past sequential narration, in addition to its various “perfect-like” functions. It is thus probably more accurately described in cross-linguistic terms as a perfective gram, belonging to the perfective gram type and expressing perfective aspect. The Imperfect in Latin, on the other hand, does seem to align with the cross-linguistic category known as the (past) imperfective gram type, and we may accordingly refer to it as a past imperfective gram, which expresses imperfective aspect.

I assume, and will make frequent reference to, the following cross-linguistically motivated grammaticalization pathway, which proceeds from left to right and represents diachronic stages of development from one gram type to the next over time (cf. especially Bybee et al. 1994; Deo 2015b; Condoravdi & Deo 2014).

(9) PERFECT TO PERFECTIVE GRAMMATICALIZATION PATHWAY

stative-resultative » perfect » emergent perfective » perfective, simple past

This grammaticalization path is robust across unrelated languages of the world. It is sometimes referred to as “aoristic drift” (e.g., in Willi 2018:411–412). As noted by Condoravdi & Deo (2014:261–262), the path of change in (9) is “unidirectional,” in that grammaticalization in the reverse order tends not to occur, and it is “uniformly generalizing,” in that the range of expression available to a particular form tends to increase over time rather than decrease (i.e., to “weaken” rather than “strengthen,” to use a common metaphor). So in (9) the perfective gram type has a broader range of contextual applications than does the perfect gram type, since (among other things) perfectives can be used to sequence events in past narration, while perfect grams typically cannot (Condoravdi & Deo 2014:266).¹⁵ At the same time, perfective grams are commonly found in resultative and experiential (i.e., “perfect-like”) functions cross-linguistically. Taken together, this means that perfectives uniformly have a wider functional range than perfects, as they can be used in all the contexts that perfects can, plus some other contexts that are unavailable to perfect grams (ibid.). An example of the change from a perfect to an perfective gram is the French *Passé composé*, which originally had only “perfect-like” functions but now is functionally perfective, being used to sequence complete events in past narration, while still retaining its perfect-like uses as well (cf. Bybee et al. 1994).

Meanwhile, stative-resultative grams are narrower in their meaning than perfects. Whereas the latter may have a full range of “perfect-like” readings, including stative, resultative, experiential, and universal (see §2.3 below on these terms), the former is typically restricted to just the stative and, less often, resultative interpretations. On the emergent perfective gram type, which is an intermediate stage between perfect and perfective, see the discussion in Section 4.4 and

15. Concretely, Condoravdi & Deo (2014:266) note that one cannot say *#John has iced the cake. He (then) went/has gone shopping* but must say instead *John iced the cake. He (then) went shopping*.

the denotation in (52) below. Elsewhere in the typological literature on tense and aspect, this category is called an “old anterior” (Bybee et al. 1994:78–81) or a “bad perfect” (Laca 2010:6–7).

Simple pasts are similar to perfectives in that both categories are used to sequence events chronologically in past narration (concentrative-sequential), but whereas perfectives are restricted to terminative and “perfect-like” uses, simple past grams “may be used for all past situations, without regard for their notional aspect” (Bybee et al. 1994:85). The English Preterite is an example (cf. *ibid.*:85; Denison 1998:133), as it may be used to refer to continuous states in the past (type *I knew the answer*) or, regularly in American English, may have a resultative-perfect interpretation (type *I lost my keys and can't find them anywhere*). In languages that lack a distinct progressive or imperfective marker, a simple past may also refer to past events in progress, as was the case at earlier stages of English, before the grammaticalization of the Progressive construction (cf. Fischer 1992:245–246 and Rissanen 1999:226 and see n.192 below for examples). According to Bybee et al. (1994:83), “the main difference between a language that has a simple past and one that has a perfective is the presence or absence of a past imperfective.” Thus, a perfect or emergent perfective gram may develop into either a perfective or a simple past depending on the grammatical circumstances of the language in question, and for this reason I put perfective and simple past in the same stage of development in (6).

In Table 2.1, I provide an overview of the semantic “weakening” (or broadening) of the gram types in (9). At each stage of development, more readings are available to the form. All of the functional labels are explained in the following sections. I put question marks in the cells for the universal perfect interpretation of the perfective gram type to signify that perfectives tend to be categorically dispreferred to other forms for the expression of universal perfect meaning, and it is unclear how this is to be analyzed. To some extent the availability of universal readings may serve as an indication of whether a form belongs to the perfect/emergent perfective gram types or to the perfective gram type, but the matter needs further study.

TABLE 2.1: Semantic weakening of tense–aspect gram types over time

| READING | MORPHOLOGICAL CATEGORY | | | | |
|---------|-------------------------|----------|------------------------|------------|----------------|
| | stative- resultative | perfect | emergent perfective | perfective | or simple past |
| | stative | ✓ | ✓ | ✓ | ✓ |
| | resultative | ✓ | ✓ | ✓ | ✓ |
| | experiential | | ✓ | ✓ | ✓ |
| | universal | | ✓ | ? | ✓ |
| | terminative | | ✓ | ✓ | ✓ |
| | imperfective | | | | ✓ |
| | STAGE I | STAGE II | STAGE III | STAGE IVa | STAGE IVb |

Diachronic semantic stages of a single morphological form →

Finally, it should be observed that, cross-linguistically, perfectives tend not to have a morphological realization of past and present time reference (with some exceptions, as in Slavic languages). Imperfectives, on the other hand, regularly do encode a tense distinction morphologically (cf. Comrie 1976:71; Ö. Dahl 1985:82; Bybee et al. 1994:83). Of course, simple past and present grams also encode a morphological contrast between past and present tense. I represent these facts in Table 2.2.

TABLE 2.2: Typical “tripartite” perfective/imperfective system

| PERFECTIVE | IMPERFECTIVE | |
|------------|--------------|------|
| | PRESENT | PAST |

2.2 Time intervals, aspect, and situation types

2.2.1 Time intervals

In the sections and chapters that follow I will refer to four basic intervals to define temporal relations with some precision. These are: “eventuality time” (t_E), “assertion time” (t_A), “speech time” (t_S), and “local evaluation time” or simply “evaluation time” (t_0).

- **Eventuality time (t_E):** *Eventuality* refers to states and events taken together (Bach 1981, 1986), on which cf. Section 2.2 above. Thus, eventuality time refers to the runtime of the eventuality (e) expressed by the verb—the interval during which that eventuality holds.
- **Assertion time (t_A):** Assertion time (Demirdache & Uribe-Etxebarria 2000) is also called “topic time” (Klein 1994:36–58) or “reference time” (Reichenbach 1947), though precise notions vary (cf. Ramchand 2018:106–107). Put simply, assertion time is the interval about which some claim is made (i.e., asserted), with respect to which the runtime of the eventuality is said to hold and may be assessed as either true or false. For instance, if I say, “What was your name again?” I do not typically mean to ask what your name was in the past and is no longer; rather, I am asking what it was that you told me your name is. The eventuality BE YOUR NAME in this case still holds at the moment of my speech act, but the assertion time interval—the interval that is being asked about—is located in the past relative to my speech act, and so the past tense *was your name* is used. Similarly, when I say, “I read a book last week. It was in Russian.” I do not mean that the book used to be in Russian and is no longer, nor that the book no longer exists. Rather, I assert that at the time to which I am referring the state BE IN RUSSIAN was true. The state may in this case be safely assumed to hold both before and after the time about which I am making my assertion, and thus eventuality time (viz. BE IN RUSSIAN) includes the assertion time (viz. the time at which I read the book last week). Tense is therefore defined (following Klein 1994:4–5, 124) as a relation between the temporal parameters assertion time (t_A) and speech time (t_s , defined just below).¹⁶ Counterintuitively, then, it does not matter for tense where the eventuality time interval is located with respect to speech time. Aspect, on the other hand—that is, “grammatical” or “viewpoint” aspect (as opposed to “Aktionsart” or “lexical aspect,” cf. Smith 1997:61 ff.)—is defined as a relation between the two temporal parameters eventuality time (t_E) and assertion time (t_A).

- Various specific aspect types and “readings” can be defined by the several relations that can hold between the two temporal intervals t_E and t_A .

16. Or, more precisely, tense is defined as a relation between assertion time (t_A) and the time of local evaluation (t_0), introduced below.

- Thus, t_E can include/properly include (\supseteq/\supset), be included/properly included in (\subseteq/\subset), coextend with ($=$), or overlap with (\circ) t_A . *Overlap* means that any relation can hold between the two intervals provided that they intersect (namely, include, be included in, coextend, or partially overlap).
- I will also make use of the precedence ($<$) and partial precedence (\leq) relations—the former requiring that one interval *entirely precede* the other, the latter that one interval *at least partially precede* the other (cf. E. Dahl 2010:57 and n.103 below).
- **Speech time (t_s):** Speech time (also called “utterance time” or “time of utterance”) is the point or interval at which the utterance or speech act is made (typically the “now” of the present moment). The speech time may be thought of as a special case of the broader term “evaluation time” (t_0), which technically does not need to coincide with t_s (it can be past or future “shifted”) but most often does, as a kind of default case (see next item).
- **Evaluation time (t_0):** For “local evaluation time” see von Stechow 1995:369 and E. Dahl 2010:56, also called “perspective time” (cf. Kiparsky 1998:38; 2002:115). It is the point or interval of perspective from which a state of affairs is evaluated as to its truth or falsity and the location of its temporal parameters (t_E , t_A , or t_s) in time relative to one another. These temporal parameters may be situated prior to, at, or after the contextually salient evaluation time. Unless “past shifted” (e.g., narrative present) or “future shifted” (e.g., futurate present), evaluation time (t_0) is assumed to coincide with speech time (t_s). Evaluation time is used in the formal semantic denotations of this dissertation rather than simply speech time, since it is technically a more precise term in that it allows denotations to be more readily generalizable to all contexts than does a system which operates with speech time alone.
- The term “ $t_{0/s}$ ” is meant to be read “speech time or time of local evaluation,” used to indicate that speech time is to be understood by default but that past or future shifting are not excluded from consideration.

2.2.2 Definitions of tense and aspect categories

I provide the basic definitions of the three tenses in (10). These are conventional in a neo-Reichenbachian framework, following Klein (1994:124).

(10) TENSE CATEGORIES

present: $t_A \supseteq t_0$

past: $t_A < t_0$

future: $t_A > t_0$

In (11) I provide simplified definitions of four major kinds of viewpoint aspect.

(11) ASPECT CATEGORIES

imperfective: $t_E \supseteq t_A$

perfective: $t_E \subseteq t_A$

perfect: $t_E \subseteq t_A \wedge t_A \supseteq t_0$

neutral: $t_E \circ t_A$

The perfective and imperfective definitions in (11) are again essentially standard in a neo-Reichenbachian framework, following Klein (1994:108). Note, however, that languages differ with respect to whether their perfective/imperfective requires inclusion or proper inclusion, as I discuss in Section 2.5 below. Here I generalize by using the simple inclusion relations (\supseteq/\subseteq) in (11). In intuitive terms, the perfective aspect can be thought of as representing eventualities as complete, typically but not necessarily in the past, of the type *I walked into the room and saw him*. Imperfective aspect, on the other hand, depicts eventualities as ongoing (at any time), as in the past progressive *I was reading my book when she walked in* or habitual *I read my book whenever I could*. As can be seen, multiple interpretations or “readings” (e.g., concentrative, progressive, habitual) are available to each major aspectual category, which I will discuss in the following sections.

The perfect aspect is expressed by the *have*-construction in English, as in *I have lost my keys* (resultative) or *I have been to Paris before* (experiential). Again, multiple interpretations or

readings are available to the perfect aspect (resultative, experiential, universal), which I discuss in Section 2.3 below.

The definition of perfect aspect given in (11) is somewhat nonstandard. Klein (1994:108) and others define perfect aspect as $t_E < t_A$ (eventuality time precedes assertion time). However, in many languages perfect aspect is expressed by a perfective plus an adverbial element designating present time reference. This is the case, for instance, in Arabic, where the affirmative particle *qad* is used with the Perfective to express perfect aspect (Cuvalay-Haak 1997:150; Comrie 1976:81). Likewise, in Biblical Hebrew, the Perfective under the scope of the presentative particle *hinnēh* ‘here, now’ regularly has perfect meaning (Sellami 2020).¹⁷ Moreover, perfectives cross-linguistically tend to be compatible with perfect interpretation but not vice versa (cf. Table 2.1 and discussion above), and so the interpretations available to the perfective are a superset of those available to the perfect (cf. Condoravdi & Deo 2014:266)—a generalization which is missed under the classic definition of perfect aspect ($t_E < t_A$). So it seems that perfect aspect is the realization of the perfective with present reference. Accordingly, the definition of perfect aspect in (11) consists of the definition of perfective aspect plus an entailment that the assertion time include the speech time or time of local evaluation ($t_A \supseteq t_0$). Note that this entailment is the same as the definition of present tense given in (10).

The past perfect (or pluperfect) and future perfect interpretations may be captured by past- or future-“shifting” the evaluation time to some contextually salient reference point before or after speech time. For instance, in the sentence *When they had left, I went to bed*, the dependent verb *had left* in the Perfect is evaluated with respect to the time at which the event of the main clause occurred, thus establishing a past-shifted t_0 , which is itself past with respect to speech time (t_s). Nonetheless, the assertion time includes the past-shifted evaluation time, thus: $(t_E \subseteq t_A \wedge t_A \supseteq t_0) < t_s$.

My formulation of perfect aspect amounts, in a manner of speaking, to a sort of Neo-Reichenbachian version of the Extended Now (XN) framework (McCoard 1978; Dowty 1979),

17. Cf. similarly the use of the presentative adverb *kāša(tta)/kāšma* ‘here, now’ (derived from the same base as the proximal demonstrative *kā-* ‘this’ and the adverb *kā* ‘here’) with the Preterite in Hittite to express perfect meaning (Hoffner & Melchert 2008:309–10, 323–4).

with t_A representing the XN interval. Yet my framework allows for this interval (t_A) to be used consistently across the denotations of *all* aspect types, rather than being something peculiar to the perfect aspect alone.

To these three well known aspects I add the neutral aspect in (11), following Grønn (2004) and E. Dahl (2010:88), based on Smith's (1997:77–81) “neutral viewpoints.” Neutral aspect requires only that the eventuality time and assertion time intervals overlap. This is compatible with any relation that might hold between the two intervals, including the first three aspectual relations in (11), namely imperfective, perfective, and perfect. For this reason, grams that are neutral in aspect are compatible with any aspectual interpretation.

2.2.3 Assertion time and adverbial expressions

I assume that assertion time may be specified by various adverbs or adverbial phrases, including *for*-adverbials (extent of time or time during which) and *in*- or *at*-adverbials (location in time or time when). However, frame adverbials, such as *today*, *yesterday*, *last year*, and so on, do not specify an assertion time. This is evident from the fact that we can say a sentence like *I was reading yesterday*. If, as is widely assumed, the progressive interpretation presupposes that the assertion time is included in the eventuality time ($t_E \supset t_A$), and if we were to suppose that *yesterday* designates an assertion time of the eventuality referred to by the verb *was reading*, then the verb *was reading* would be predicted not to have a progressive interpretation in this context, since the interval referred to by *yesterday* includes that of BE READING, and so the assertion time would include the eventuality time ($t_E \subset t_A$), which is the opposite of the relation needed for the progressive interpretation. I therefore take frame adverbials to act, as their name suggests, as a general “frame” or constraint on where the assertion time interval is located in time. Thus, for example, the use of the adverb *yesterday* simply requires that the assertion time interval be contained within the time span referred to by *yesterday*. So, if I say, “Yesterday, I was reading when you rang my doorbell,” the assertion time of *was reading* is to be understood as the time at which you rang my doorbell, which is an interval properly included in the runtime of BE READING, so the past progressive interpretation is readily understood. The inclusion of the

frame adverb *yesterday* imposes the added constraint that the whole event took place at some point within the day before the utterance was made. Likewise in a sentence like *Yesterday, I read for an hour and a half*, the *for*-adverbial specifies the assertion time interval, not the frame adverb.

2.2.4 Situation types and actionality

I operate here with the basic “Vendlerian” situation types (or predicate types), namely states (e.g., *know, be happy, sleep*), activities (e.g., *run, write, eat*), accomplishments (e.g., *write a letter, eat up, strip down, drown, bury*), and achievements (e.g., *die, finish, fall asleep*). “States” are contrasted with the other situation types, which are collectively referred to as “events.” The reader is referred to Vendler 1957; Moens & Steedman 1988; Smith 1997:27–90 for fuller explanation of these categories. There is sometimes need to distinguish “stage-level states” from “individual-level states” (cf. Kratzer 1995). The former refers to impermanent states like BE HAPPY or SLEEP, which tend to behave similarly to events in certain respects. The latter refers to permanent states like BE TALL or KNOW, which often behave quite differently from other kinds of eventualities (e.g., they cannot be combined with the Progressive in English: **was being tall, *was knowing*).

The term *transformative* is used to refer to the natural class of accomplishments and achievements. These stand in contrast to *non-transformative* situation types, which include states and activities (cf. Ruipérez 1954). This terminology is more precise in referring to natural classes of situation types than the “telic” vs. “atelic” opposition (used, e.g., in E. Dahl 2010), since telicity operates at the verb phrase (VP) level, including at least internal arguments of the verb (cf., e.g., E. Dahl 2010:135 ff.), whereas the transformative/non-transformative contrast targets just the lexical verb itself without its arguments (but including preverbs that modify the lexical meaning of the root). When verbal arguments are taken into account, the telic/atelic contrast is used. *Telic* refers to a predicate (VP) that has an inherent endpoint, such as *write a letter* or *walk to the park* (whose verbs are both non-transformative, the activities *write* and *walk*). *Atelic* refers to a predicate (VP) that lacks an inherent endpoint, such as *write letters* or *walk in*

the park.

2.3 “Perfect-like” readings: Theoretical background

Throughout this dissertation I use the term “perfect-like” in a semi-technical sense to refer collectively to the readings most characteristic of perfect aspect—the stative, resultative, experiential, and universal readings—or any two or more of these taken together. I put the term in “scare quotes” throughout to signal that it is a term of convenience rather than an entirely satisfactory description of these readings, as they are not actually restricted to expression by perfect grams but may also be expressed, to varying degrees depending on the language, by perfective and simple past grams, and, in the case of the universal interpretation at least, by present and imperfective grams as well.

I take the stative reading to arise when the runtime of a state eventuality holds at the relevant evaluation time ($t_E \supset t_0$). The reading may be compared to the English “*have got*” construction, as in *I’ve got something to tell you*, though this is not a productive use of the Perfect in English (cf. Kiparsky 2002:120–1). One may also compare English stative passives like *is open* or *is gone*, which do not assert that there was a preceding event of opening or going (though such events may be inferred). In such cases, the speaker asserts that the state holds at the present moment but says nothing about any event that gave rise to that state (in contrast to the resultative reading). When the evaluation time aligns with speech time, the interpretation is called “present stative” (cf. (12)/(31a) below); when the evaluation time is shifted to the past ($t_0 < t_s$) it gives rise to the “past stative” interpretation instead (cf. (31b) below). In all cases, I assume that the assertion time includes the eventuality time ($t_A \supseteq t_E$), as is typical of perfect and perfective aspect. Thus, the denotation of the stative reading can be represented as follows: $t_E \supset t_0 \wedge t_E \subseteq t_A$ (i.e., the state holds at speech/evaluation time and it is present in tense).

Besides the stative, the three main readings of the perfect aspect are the resultative, experiential, and universal. The resultative reading refers to an event (NB not a state) whose direct effect or outcome (called a “result state”) continues to hold at the time of speech or time of

local evaluation (type *Look how far we've come*).¹⁸ The experiential reading refers to an eventuality whose consequent state holds at speech/evaluation time but not necessarily its result state (type *I have been to Paris*, which says nothing about whether or not I am in Paris currently). A consequent state is one that follows necessarily from the mere fact of an event's having taken place. It is a property of a time such that it is preceded by a time which contains an eventuality of a particular sort, such as GO TO PARIS. A result state is the target state of a change-of-state predicate. Given that the target state of *come* is BE HERE, the result state implied by *We've come* is WE ARE HERE. Typically, the result state is oriented toward the internal argument of an event (type *I've made pizza if anyone wants some*, or *We have arrived*), whereas the experiential reading targets the external argument (*Don't worry, I know how to make pizza because I've made it before*). The universal reading refers to some eventuality initiated some time ago and continuing up to the present moment or local evaluation time (type *I have lived in LA since 2014*). I take all three of these readings to be available when the assertion time includes both eventuality time and evaluation time ($t_E \subseteq t_A \wedge t_A \supseteq t_0$) and the eventuality time at least partially precedes the evaluation time ($t_E \leq t_0$). When the evaluation time coincides with speech time (t_s), the verb can be said to have “present reference,” translatable typically by the English *have*-Perfect in the present. When the evaluation time (t_0) is “back-shifted,” such that it does not coincide with speech time but precedes it, the assertion time will necessarily precede speech time (but still include the back-shifted evaluation time) in a use called “counter-sequential” (type ‘had done such-and-such’).

The difference between the resultative, experiential, and universal readings of the perfect aspect is a much debated topic. I assume that these all reflect the same basic aspectual rela-

18. The event referred to in a resultative expression (especially as expressed by the Aorist in Greek and Vedic Sanskrit) is often located in the recent past relative to speech/evaluation time, though this is not a requirement. The recent past interpretation is referred to in the semantic literature as the “hot news” reading of the perfect aspect (since McCawley 1971; cf. Binnick 1991:99), otherwise called the “recent past” reading (Comrie 1976:60–61). However, I follow Kiparsky (2002:120) in assuming that “the recent past reading is a special case of the resultative reading,” since virtually all recent past readings are resultative (type *The article has just been published*, with a continuing result state) but not all resultatives are recent (type *She has long since retired*). Among the few exceptions to this are recent acoustic events—as in *Why have you cried out?*—which may be expressed by the Perfect in some dialects of English (and by the Aorist in Homer, as at *Od.* 9.403–4) but do not produce a clear and lasting result *per se*. So, when being very precise, it may be useful to make a distinction between resultative and recent past readings. But as the latter is distinct only when a certain kind of verb is used, I will group it together with the resultative reading for convenience throughout this dissertation.

tion, as just described, and that a mixture of semantic and pragmatic effects, such as predicate type and context, are responsible for the differences. Some support for this view comes from the fact that one and the same predicate can have different perfect readings under different circumstances. Compare the resultative perfect *I have (just) thrown the ball on the roof* (and I can't get it down; result state holds at speech time) versus the experiential *I have thrown the ball on the roof (before)* (so now I know to be more careful; result state does not hold at speech time but “consequent state” does). The difference between the resultative and experiential is thus a matter of whether the result state holds at evaluation time or not, while in the universal reading the eventuality time interval is “stretched” from some point in the past typically all the way to the evaluation time ($t_E \supset t_0$), though this is not strictly required (cf. *I have been working all afternoon (but am now resting)*, which is licensed in a context in which I am explaining why I'm so tired).

The stative reading, too, can be captured by the same relation as the other readings of the perfect, provided that we assume eventuality time includes evaluation time (which is included in assertion time). I represent the stative (t_E'), resultative (t_E), experiential (t_E), and universal (t_E'') perfect readings in Figure 2.1. Note that all four are compatible with the general denotation of perfect aspect ($t_E \subseteq t_A \wedge t_A \supseteq t_0 \wedge t_E \leq t_0$), on which cf. n80 in Section 4.4 below.

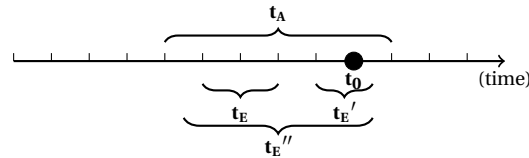


FIGURE 2.1: Perfect aspect: resultative/experiential (t_E), stative (t_E'), and universal (t_E'')

Where the assertion time (t_A) includes the speech/evaluation time ($t_{0/s}$), if the eventuality time (t_E) fully precedes $t_{0/s}$ but is also included in t_A , this gives the sense of the “continued relevance” of that eventuality at speech/evaluation time. That is, since both t_E and t_0 are included in t_A , a link between t_E and t_0 is established and the eventuality is felt to be in some way connected (and so “relevant”) to the present moment. This configuration, represented by t_E in Figure 2.1, may be interpreted as implying either that the result state of the eventuality continues to hold at speech/evaluation time (resultative perfect reading) or that its consequent state does (expe-

rential perfect reading), the choice between the two being based on various factors, including pragmatic ones, whose details do not concern us here (factors such as context, predicate type, usage conventions in competition with other forms, and so on).

Because the eventuality time need only partially precede the evaluation time ($t_E \leq t_0$), the eventuality time may, in fact, fully include the evaluation time (i.e., $t_e \supset t_0$, where the argument e is a state predicate). I take cases of this sort to give rise to the stative perfect use of the Aorist of the type seen in (12), which is represented by t_E' in Figure 2.1. In this use, the state expressed by the Aorist is ongoing at speech/evaluation time in that its runtime includes that of the speech time (or some contextually salient “past-shifted” evaluation time). For discussion of the example in (12) see (31a) in §4.1 below.

(12) STATIVE USE OF THE AORIST INDICATIVE IN HOMER

μή μ' ἔρεθες σχετλίη, μή χωσαμένη σε μεθείω,
τῶς δέ σ' ἀπεχθήρω ὥς νῦν ἔκπαγλ' ἐφίλησα_[AOR.] (Il. 3.414–5).

‘Don’t provoke me, stubborn woman, lest having been angered I cut you loose, and I come to despise you so terribly as I currently love_[AOR.] you’.

I take the universal interpretation to arise when the eventuality is explicitly stated to have begun in the past and to have a relatively long duration with respect to the assertion time (however long or short it may be). This reading is marginally compatible with the denotations of perfect and perfective aspect (and so we find an example or two of universal uses of the Aorist in Homer), which we may conceptualize as arising when the eventuality time is coextensive or nearly coextensive with the assertion time, and the eventuality time approaches or includes the evaluation time, as represented by t_E'' in Figure 2.1. However, the universal reading arises more straightforwardly from imperfective aspect (where $t_E \supseteq t_A$, again with an overt adverbial phrase asserting that the event began some time ago) and is accordingly expressed most regularly in Greek by the Present indicative (Smyth 1956:422–3), often with an overt adverbial relating to the past, such as *πάρως* ‘before’ (e.g., Il. 23.474).

2.4 Terminative readings: Theoretical background

I distinguish two main types of what I call “terminative” readings, which are not *a priori* restricted to any particular morphosyntactic category. I use the term *terminative* to mean that the eventuality is ‘bounded’ by assertion time (cf. E. Dahl 2010:73–76), designating the total set of readings compatible with the relation $t_E \subseteq t_A$. Terminative interpretations may be either concentrative (type *I bought a book* or *I wrote a book*) or complexive (type *I slept for six hours*), depending on context and situation type of the predicate (activity, achievement, state, etc.). Note that the complexive interpretation is only available to non-transformative eventualities (i.e., states and activities) or atelic predicates.

I represent the concentrative interpretation in Figure 2.2.

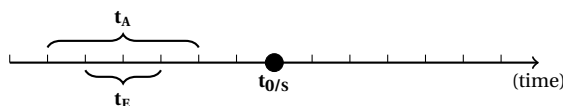


FIGURE 2.2: Concentrative interpretation, past tense

The concentrative reading is so called in reference to its “concentration” of the eventuality entirely within the bounds of the assertion time.¹⁹ It is regularly found in sequential narration, where eventualities are characterized as complete in the past (of the type *Mary ate the cake, then went to bed*).²⁰ While sequential narration is typically concentrative, the concentrative relation ($t_E \subset t_A$) may in fact hold even in isolated, non-sequential contexts, such as *Mary ate the cake (and did nothing else of relevance) while I was away* (cf., e.g., (36b) in §4.2 below). Accordingly, a form that has concentrative as a use is not automatically preferred in sequential narration. I

19. For the term *concentrative* see Smyth 1956:430–431 (though in a sense closer to what is here called *complexive*). The term goes back at least to Krüger (1873:168) (“konzentrierte Erscheinung”), in reference to the “summarizing” use Aorist to atelic predicates. I use the term in a more restricted way, referring to *events* (i.e., non-states) and stage-level states for which the span of the eventuality time is fully included in the assertion time ($t_E \subset t_A$). Such a relation is not possible for individual-level state predicates, which can be terminative only in the inceptive or complexive readings. The concentrative reading is variously known in the literature as “confective,” “metaptotic,” “completive,” “eventive,” “perfective,” “momentary,” “narrative,” “resultative,” “effective,” and “episodic,” with little consistency in what these labels actually refer to (cf., among others, Schwyzer & Debrunner 1950:260–261 and E. Dahl 2010:76, 82).

20. Sequential narrative uses “represent the perfective reading *par excellence*” (E. Dahl 2010:78).

will therefore specify *sequential* or *concentrative-sequential* wherever a form is regularly used in sequential contexts, while *concentrative* is used where no such specification is necessary or relevant.

I take the complexive reading to be captured by the coextension relation ($t_E = t_A$), represented in Figure 2.3, which shows how the entire span of t_A is saturated by t_E (as applied to a non-transformative eventuality, such as SLEEP).

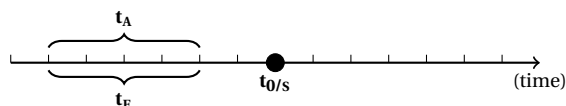


FIGURE 2.3: Complexive interpretation, past tense

More precisely, *complexive* refers to a terminative use in which a non-transformative eventuality (cf. §2.2 above) is bounded not by its inherent situation type or telicity but by the limits imposed on it by the morphological form that takes it as an argument (cf. Bary & Egg 2012; E. Dahl 2010:73–76, 82), such that t_E is coextensive with ($=$) t_A in the past ($t_A < t_0$).²¹

There are other subcategories of the terminative relation ($t_E \subseteq t_A$) as well, including the inceptive and egressive readings,²² which focus respectively on the beginning or end of an eventuality. English typically expresses such notions lexically (*fell asleep*, *touched down*), where Greek uses particular forms of the verb (Imperfect or Aorist for inceptive; Aorist for egressive). These are terminative in the sense that they are bounded by assertion time, but differ from the con-

21. For the term *complexive* see Smyth 1956:430–431, though in a broader sense than what I mean by *complexive* here. The term “komplexiv” was apparently coined by Hermann (1927:208). It is also called in the literature “constative” (Purdie 1898:67–68; Jacobsohn 1933:305–309), “terminative” (E. Dahl 2010:73–76, 82), “concentrative” (Smyth 1956:430–431), “factive” (“statement of fact”), “totalitarian” (cf. Schwyzer & Debrunner 1950:261), and a “phase interpretation” (Bary & Egg 2012:113). It is often taken to include the iterative-pluractional reading, which I treat separately (cf. Jacobsohn 1933:306–307; Schwyzer & Debrunner 1950:261). Purdie (1898) uses the term *constative* in a similar manner, albeit somewhat broader in scope (cf. n.57 in §4.2 below). For semantic and typological literature on the complexive reading see Comrie 1976:16–7 (for both perfective and imperfective aspect cross-linguistically), E. Dahl 2010:73–4 (for perfective aspect cross-linguistically, under the name “terminative-egressive”), and Bary & Egg 2012:113 (for the formal semantics of the use in Classical Greek).

22. The inceptive use is in the Greek grammatical literature called “ingressive” when it applies to the Aorist, and “inchoative” when it applies to the Imperfect. I use the term *inceptive* as a way of designating a verb of either functional category (Aorist or Imperfect) that in some context means ‘began to be X’ (for states) or ‘began to do X’ (for events), where X is the lexical meaning of the verb. The term *egressive* comes from E. Dahl 2010:73–76, but the use is also referred to under the labels “effective” (e.g., Purdie 1898:65) and “resultative” (e.g., Smyth 1956:430).

centrative and complexive readings in that they only have a lower or upper bound. These are represented in Figures 2.4 and 2.5 respectively.

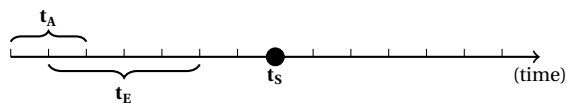


FIGURE 2.4: Inceptive interpretation

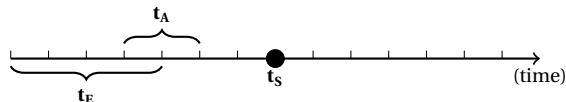


FIGURE 2.5: Egressive interpretation

By way of illustration, I provide examples of the inceptive use of the Aorist in Homeric Greek in (13) and of the egressive use of the Aorist in Classical Greek in (14). For a Homeric example of the egressive Aorist see (41) in Section 4.2 below. Note that in (13) the Aor. ind. ἔδδεισεν is built to the state predicate δέιδω ‘fear, dread, be afraid (of)’, so its interpretation ‘got scared, became afraid’ in this context is inceptive. In (14), the Aor. ind. ἡγωνίσω is built to the accomplishment predicate ἀγωνίζομαι ‘contend for a prize’. In contrast to the IpF. ἡγωνίζου ‘competed, participated in a contest’ built to the same lemma, the Aorist here refers only to the culmination of the action referred to by the verb, hence ‘finished up, placed in the competition’.

(13) INCEPTIVE AORIST IN HOMER: STATE PREDICATE

ὦς ἔφατ', ἔδδεισεν δὲ βοῶπις πότνια Ἥρη (*Il.* 1.568).

‘Thus he spoke, and ox-eyed queen Hera **was seized with fear**’.

(14) EGRESSIVE AORIST IN CLASSICAL GREEK: ACCOMPLISHMENT PREDICATE

τί οὖν; ἡγωνίζου[IPF.] τι ἡμῖν; καὶ πῶς τι ἡγωνίσω[AOR.]; (*Plat. Ion* 530a).

‘So what (of it)? Pray tell, did you do some competing[IPF.]? And how **did you compete**[AOR.]?’

[i.e., ‘Did you participate in the contest, and (if so) how did you *finish up* or *place* in it?’]

The Russian Perfective (Pfv.) also has egressive uses, as shown in (15). The past Imperfective (Ipfv.) verbs in (15) are conative (see below).

(15) RUSSIAN PERFECTIVE, EGRESSIVE USE (ACCOMPLISHMENT PREDICATES)

- a. *On mnogo delal_[IPFV.], no malo **sdelal**_[PFV.].*

‘He did (i.e., undertook)_[IPFV.] a lot but **did (i.e., accomplished)**_[PFV.] little’ (ex. Comrie 1976:113).

- b. *On dolgo ugovarival_[IPFV.] menja, no **ne ugovoril**_[PFV.].*

‘He was persuading_[IPFV.] me for a long time (i.e., he spent a long time trying to persuade_[IPFV.] me) but **didn’t (successfully) persuade**_[PFV.] me’ (ex. Comrie 1976:19).

The term *terminative* strictly does not exclude the “perfect-like” readings as defined above (at least the resultative and experiential). However, for practical purposes I use *terminative* throughout this dissertation to pick out only the non-“perfect-like” terminative readings.

2.5 Imperfective grams: Typology and semantics

There are basically three things one can mean when referring to “an imperfective,” which I classify into three *Types* (capitalized to differentiate these from “gram types”), presented in Table 2.3. The pseudo-denotations in Table 2.3 are deliberately crude and greatly simplified, in order to give a “big-picture” overview of the Types. Far more sophisticated formalisms and analyses are available, e.g., in Deo 2015b; Condoravdi & Deo 2014; Altshuler 2014; Arregui et al. 2014; Grønn 2008a, 2008b.

The denotation of Type 1 imperfectives in Table 2.3 says that eventuality time *properly includes* assertion time ($t_E \supset t_A$), meaning that the coextension of the two intervals is ruled out. In terms of readings, Type 1 permits (i.e., may be interpreted in some context as) what are commonly called the progressive/continuous-state (e.g., *I was running/sleeping*) and habitual (e.g., *I used to run*) imperfective uses (explained in more detail in §5.1 below). I represent this in Figure 2.6.

TABLE 2.3: Typology of imperfective grams

| | | | |
|--------------|------------------------------------------|-----------------------------|------------------------------------------|
| Types: | 1. Allows $t_E \supset t_A$ | 2. Allows $t_E = t_A$ | 3. Allows $t_E \subset t_A$ |
| Denotations: | $t_E \supset t_A^a$ | $t_E \supseteq t_A$ | $t_E \circ t_A^b$ |
| Examples: | Central Semitic, Romance ^c | eastern Slavic ^d | Sanskrit, western Slavic ^e |

^a Cf., e.g., Klein 1994:108; Arche 2006:172–173; Grønn 2008a:155, 157 (precise implementations vary).

^b This is Grønn’s (2004) and E. Dahl’s (2010:88) “neutral aspect,” based on Smith’s (1997:77–81) “neutral viewpoints.” Note, however, that Grønn (2008b:127) defines the Russian Imperfective with a disjunction: $t_E \supseteq t_A$ *or* $t_E \subseteq t_A$, which he notes amounts to essentially the same thing as $t_E \circ t_A$.

^c Grønn (2008a:158) claims that the imperfectives in Romance must belong to what I call Type 2 ($t_E \supseteq t_A$) to allow for the “narrative Imperfect.” This usage, however, occurs mostly to achievement predicates (Grønn 2008a:159–161) and requires specific reference “to a definite point in time” (Arregui et al. 2014:335).

^d The “general-factual” Imperfective is taken to denote the coextension relation, $t_E = t_A$, which most often corresponds to “complexive” uses, as is clear from examples and discussion in Ö. Dahl 1985:74–77; Altshuler 2014; Arregui et al. 2014:330–334; Janda & Fábregas 2019:699–708 (though it also has “experiential” perfect uses). Janda’s (2019:498) metaphor that the “Imperfective situation can fill whatever time is available” is thus captured quite nicely by this denotation. Note that complexive or “general-factual” uses of the Russian Imperfective “can never move the narration forward” (Grønn 2008a:151), though this appears not to be true of the complexive uses in Greek.

^e Dickey (2015; 2000; 1997:90–115) shows that the eastern Slavic group, including Russian, does not use the Imperfective in sequential narration (similarly Arregui et al. 2014:335), while the western Slavic group does. However, the western Slavic Imperfective is, according to Dickey (1997:102), “unsuitable to refer to single achievements in the past” (in contrast to the Sanskrit type), while the eastern Slavic Imperfective allows this (Dickey 1997:103).

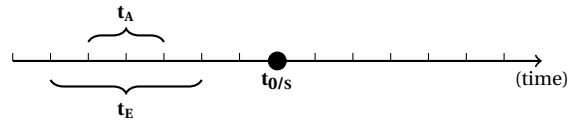


FIGURE 2.6: Progressive/continuous-state and habitual interpretations, past tense (available to Type 1, 2, and 3 imperfectives)

It is sometimes assumed that the coextension relation ($t_E = t_A$) with an event cardinality greater than 1 represents the habitual reading (e.g., E. Dahl 2010:71–72). It is not uncommon, however, to regard the habitual reading as compatible with the proper inclusion relation ($t_E \supset t_A$), which I follow here (cf. Klein 1994:108; Arche 2006:173; Grønn 2008a:155, 157). However, habituality has convincingly been analyzed as a kind of modality, rather than aspect, by Boneh &

Doron (2010, 2008) (cf. similarly Arregui et al. 2014:317, 343), and as such it may not be strictly tied to the imperfective aspect, as is often assumed.²³ Such accounts of habituality seem quite attractive, and it is highly likely that more machinery is necessary to adequately account for habituality than I have represented here in my deliberately simplified denotations. Indeed, generic readings are known to occur among all aspect types in Greek—most relevantly the Aorist in its gnomic use (cf. §4.3 below)—so the perfective aspect cannot be taken *a priori* to be incompatible with habituality. Note also that the progressive aspect, which surely requires that $t_E \supset t_A$, is itself not incompatible with habitual interpretation given the right context, as in *Bill is smoking again* or *We’re going to the opera a lot these days* or *At that time I was working the night shift* (Comrie 1976:37). I assume, then, that the proper inclusion relation $t_E \supset t_A$ is *compatible* with a habitual interpretation, though, given the modal nature of habituality, this purely aspectual relation is insufficient on its own to account for the habitual uses of imperfective aspect. However, since a fuller account of habituality would take us too far afield, I leave the details unspecified.

The denotation of Type 2 imperfectives in Table 2.3, by contrast, says that eventuality time *includes* assertion time ($t_E \supseteq t_A$), allowing either total inclusion of t_A within t_E ($t_E \supset t_A$) or coextension of the two intervals ($t_E = t_A$). Type 2 thus permits a reading not permitted by Type 1, namely the complexive reading (e.g., *I slept for six hours*), which I take to be captured by the coextension relation ($t_E = t_A$) represented in Figure 2.3 above (see §2.4 above for further discussion), repeated here as Figure 2.7.

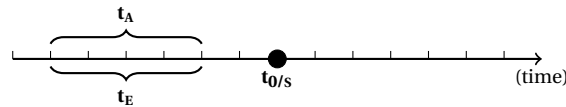


FIGURE 2.7: Complexive interpretation, past tense

The Type 3 “imperfective” in Table 2.3—which we will see is not really an imperfective at all—requires only that the two intervals overlap ($t_E \circ t_A$), thus permitting the inclusion of either interval within the other ($t_E \supseteq t_A$ or $t_E \subseteq t_A$) and the coextension of the two intervals ($t_E = t_A$). The main difference between Type 3 and the other two types is that Type 3 permits the concentrative

23. Cf. Comrie 1976:26–32, Klein 1994:206–13, Ramchand 1996, Green 2000, E. Dahl 2010:71–3, Deo 2020.

reading ($t_E \subset t_A$) represented in Figure 2.2 (see §2.4 above for further discussion), repeated here as Figure 2.8.

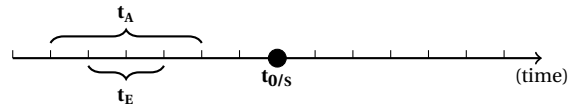


FIGURE 2.8: Concentrative interpretation, past tense

Typologically speaking, imperfective Types 1 and 2 are taken to constitute the imperfective gram type (cf. Ö. Dahl 1985:69–79) and may be said to express imperfective aspect ($t_E \supseteq t_A$). Type 3, on the other hand, represents not the imperfective but the simple past gram type (Bybee et al. 1994:84–85, 92–95; Klein 1994:102; Comrie 1976:53, 55, 58), which may be said to be neutral in aspect ($t_E \circ t_A$) (following Smith 1997:77–81; Grønn 2004; E. Dahl 2010:88). Accordingly, I will hereinafter refer to past-referring “imperfectives” of Type 3 as *simple past* grams, since this is a more accurate characterization based on their functional range—i.e., expressing any sort of aspectual relation between t_E and t_A in the past (where *past* is defined as the relation $t_A \preceq t_{0/s}$ (assertion time at least partially precedes speech/evaluation time); cf. n.103 in §5.6 below). The aspect expressed by a simple past tense will be referred to as *neutral aspect* (relation $t_E \circ t_A$).

The contrast between imperfective Types 1 and 2 is exemplified by Janda & Fábregas (2019:700), showing how Russian (like eastern Slavic generally) uses its past Imperfective for sentences like *I read all night* (*čital vsju noč'*) where Spanish, like Romance generally, must use its “Preterite” or past perfective (*leyó toda la noche*). As is suggested by these examples, the perfective gram type ($t_E \subseteq t_A$) must also come in at least two varieties (Types): The “Spanish type” (Type 1, $t_E \subseteq t_A$) and the stricter “Russian type” (Type 2, $t_E \subset t_A$). Perfective grams characteristically have concentrative as a use (cf. Figure 2.2/2.8 above), but it depends on the language whether a perfective gram is open to complexive interpretation (cf. Figure 2.3/2.7 above) or not. The former will be said to be a Type 1 perfective, such that $t_E \subseteq t_A$ (coextension permitted, has the complexive reading, as in Spanish); the latter will be said to be a Type 2 perfective, such that $t_E \subset t_A$ (coextension not permitted, lacks the complexive reading, as in Russian).

Putting the two Types of imperfectives together with the two Types of perfectives just discussed, we can observe a systematic difference across languages, as shown in Table 2.4.

TABLE 2.4: Aspectual systems differing by complexive use

| | Imperfective | Perfective |
|-----------------|---------------------|---------------------|
| Type 1: Spanish | $t_E \supset t_A$ | $t_E \subseteq t_A$ |
| Type 2: Russian | $t_E \supseteq t_A$ | $t_E \subset t_A$ |

In other words, the Russian Imperfective is semantically slightly “weaker” (i.e., permits a broader range of interpretations) than the Spanish Imperfective, while the Spanish Perfective is slightly “weaker” than the Russian Perfective. Accordingly, Spanish encodes complexive readings by means of its Perfective morphology, while Russian does so with its Imperfective. Whichever form has the “stronger” denotation blocks the application of the semantically “weaker” form in just those contexts where the “stronger” form can apply.

This is also true in languages that have a simple past tense standing in contrast to a perfective, where the complexive use falls to the perfective (Dickey 2015:30), which is the semantically stronger form, as shown in Table 2.5.

TABLE 2.5: Western Slavic aspect

| | “Imperfective” (= simple past) | Perfective (Type 1) |
|----------------|-----------------------------------|------------------------|
| western Slavic | $t_E \circ t_A$ | $t_E \subseteq t_A$ |

Similarly, as suggested first in Hollenbaugh 2018, Homeric Greek has an aspectual contrast of the type in Table 2.6.²⁴

24. The denotation of the Aorist is more complex than what is relevant to show in Table 2.6. See Section 4.4 and (52) below, with accompanying discussion, for a more detailed account and full denotation of this “emergent perfective” gram.

TABLE 2.6: Homeric aspect

| | “Imperfect” (= simple past) | Aorist (= emergent pfv.) |
|---------------|--------------------------------|-----------------------------|
| Homeric Greek | $t_E \circ t_A$ | $t_E \subset t_A$ |

As the Homeric Aorist does not appear to regularly permit the coextension relation, the complexive reading (i.e., coextension of t_E and t_A in the past) is regularly expressed only by the Imperfect in Homer, as (16) demonstrates.²⁵ Here, $\pi\alpha\nu\nu\chi\iota\omicron\varsigma$ ‘all night long’ overtly indicates the bounds of the assertion time interval (t_A), and the actions of the verbal predicates (t_E) are asserted to last for exactly that long. Hence, the two intervals are coextensive, yielding the complexive reading.²⁶

(16) COMPLEXIVE IMPERFECT IN HOMER

$\pi\alpha\nu\nu\chi\iota\omicron\iota$ μὲν ἔπειτα κάρη κομόωντες Ἀχαιοί
 $\delta\alpha\acute{\iota}\nu\upsilon\omicron\tau\omicron$, Τρῶες δὲ κατὰ πόλιν ἥδ’ ἐπίκουροι·
 $\pi\alpha\nu\nu\chi\iota\omicron\varsigma$ δέ σφιν **κακὰ μῆδετο** μητίετα Ζεὺς
 σμερδαλέα κτυπέων· (Il. 7.476–9).

‘Then, all night long the long-haired Achaeans **feasted**, and the Trojans likewise throughout the city, and their allies; and all night long Zeus, the counsellor, **plotted harm** against them, thundering terribly’.

Homeric Greek thus resembles the “western Slavic type” system (cf. Table 2.3 above), in that it shows a simple past tense gram (= Type 3 “imperfective”), namely the Imperfect, rather than

25. So conclude Purdie (1898:70 “constative”) and Jacobsohn (1933:307–309), with very few possible exceptions discussed in Section 4.2 below.

26. Note that in the case of the complexive interpretation the ability to translate with the English Progressive construction (thus rendering the Imperfects in (16) respectively as ‘were feasting’ and ‘was plotting harm’) is not particularly informative as to their reading or aspect (cf. §1.4 above and n.98 below). This is because the English Progressive has a functional range that is not typical of many progressive grams cross-linguistically. As Comrie (1976:38) puts it, “in English the meaning of the Progressive has extended well beyond the original definition of progressivity as the combination of continuous meaning and nonstativity.” For this reason, it is also possible to translate examples of complexive Aorists in Classical Greek with either the Progressive or the Preterite in English: $\epsilon\beta\alpha\sigma\acute{\iota}\lambda\epsilon\upsilon\sigma\epsilon$ [Aor.] Αἰγύπτου τέσσερα καὶ πεντήκοντα ἔτεα, τῶν τὰ ἐνὸς δέοντα τριήκοντα Ἰζωτον... ἐπολιόρχεε [lpf.] ‘He ruled/was ruling Egypt for fifty-four years (Aor.), for twenty-nine of which he besieged/was besieging (lpf.) Azotus’ (Hdt. 2.157.1).

an imperfective gram (of Types 1 or 2). As mentioned earlier, despite the fact that the relation $t_E \supseteq t_A$ is compatible with the coextension relation and so with the complexive reading, the Imperfect of Homer cannot represent a Type 2 imperfective, since it is also compatible with use in sequential narration and thus with the concentrative use (unavailable under the relation $t_E \supseteq t_A$, as Russian shows (cf. Table 2.3 note e)). Examples of the concentrative Imperfect in Homer may be found in (62) in Section 5.3 below.

Throughout this dissertation I will use the term *imperfective readings* (or *interpretations* or *uses*) in order to refer to the set of readings most characteristically associated with imperfective aspect, i.e., those which are neither terminative nor “perfect-like.” The term *imperfective readings* thus picks out just those readings captured by the relation $t_E \supset t_A$, which is practically limited to the progressive-conative, continuous-state, and generic-habitual interpretations. The term is not meant to include the terminative readings available to Type 2 imperfectives (i.e., complexive etc.)

2.6 Modality: indicatival vs. modal uses of the injunctive

The Ṛgvedic injunctive forms, which lack the augment, are often used in functions identical to those regularly available to the indicative (i.e., augmented) Aorist, Imperfect, and Perfect/Pluperfect. Since the injunctives do not belong to the indicative mood, to avoid confusion I refrain from calling these uses “indicative.” Instead, I use the term “indicatival.” This term is typically used in contrast to the modal uses available to the injunctive, including the gnomic-habitual and directive uses. It thus captures all “indicative-like” uses of the injunctive. Note, however, that I group the gnomic-habitual uses with the modals, for reasons explained in Sections 2.3 above and 8.2 below. In addition, I exclude the performative-reportive uses from the modal and indicatival categories, due difficulties deciding how they should be treated (see discussion in §9.2 below).

The term *indicatival* is also used in a broader sense in my presentation of the frequencies of each usage of the Aorist indicative/injunctive and Imperfect/Present injunctive. In these cases, *indicatival* refers to all verbs of the relevant functional category that are used in a non-modal

function, including the indicative (augmented) forms as well as the injunctives. Of course, indicatives are trivially indicative in function, but it is often informative to look at how frequent a particular use is with respect to all the indicative uses of that functional category, whether indicative or injunctive.

In my treatment of the Ṛgvedic material, I do not provide denotations that capture the modal interpretations of the injunctive. This practice is in contrast to E. Dahl's (2010) treatment, which includes specific denotations for modal categories involving possible worlds. Yet because this study is focused primarily on tense and aspect, I have thought it best not to give modal denotations of this kind, especially since these would not be relevant to the Greek data and so would not contribute much to the comparison of the two languages. My aim is to provide denotations that adequately account for the observed functional range of the forms in question as regards tense and aspect. As such, these denotations need only be *compatible* with the modal interpretations observed for the injunctives. I have accordingly included nothing in my denotations of the Aorist and Present injunctive that would exclude the possibility of various modal interpretations, but neither have I explicitly indicated how these modal interpretations might be represented in the semantics. While questions concerning modality cannot really be separated from tense and aspect, I defer such matters to future research.

The indicative vs. modal distinction is not relevant to the Greek data, since there the augmentless forms are simply indicative, just like their augmented counterparts, having no regular modal functions of the kind available to the Ṛgvedic injunctives. I refer to the Imperfect, Aorists, and Pluperfects that lack the augment as “augmentless” rather than “unaugmented” (inspired by Whitney's (1889:221) practice). This is because the term *unaugmented* could be taken to presuppose that the augmented forms are the more basic variety, and that the forms lacking the augment are derived by removal of the augment from the augmented ones. But this is not the case. If anything, the augmented forms could be viewed as being derived from the augmentless (or injunctives in Vedic) by the addition of the augment. I therefore prefer the term *augmentless*, which I apply consistently in my treatment of the Homeric forms and occasionally to the Ṛgvedic injunctive forms as well.

Part I

**Aorist and Imperfect indicative in Homeric
Greek**

Introduction

The Aorist at all stages of Greek is commonly characterized as a perfective gram, expressing perfective aspect, and the Imperfect, belonging to the Present system, is characterized as a past imperfective gram, expressing imperfective aspect (e.g., Napoli 2006:64). This state of affairs is commonly presented as *communis opinio* in various handbooks (Fortson 2010:83, Weiss 2020:378). The purpose of this chapter is to critically investigate the validity of this characterization of the Greek aspect system, particularly as it is found in the earliest literary attestation in the Homeric epics (*Iliad* (*Il.*) and *Odyssey* (*Od.*), with occasional reference to the Homeric Hymns (*HH*) and the *Theogony* (*Th.*), *Works and Days* (*WD*), and *Shield of Heracles* (*SH*) of Hesiod (Hes.)/Pseudo-Hesiod (Ps.-Hes.)). I will also discuss the more ancient but sparsely attested evidence of Mycenaean Greek, which provides interesting data pertaining to early usage of the Aorist and the augment (though virtually none concerning the Imperfect).

The augment appears only rarely in the Mycenaean documents, while in Homeric Greek it is common but not essential to the formation of the indicative past tenses. As in Vedic, the use of the augment in Homeric is typically characterized as “optional,” though the extent of its optionality and what precisely is meant by “optional” varies widely in the literature. I will here pursue the matter only so far as is required to show that the augment, whatever its origin and synchronic function, does not contribute an aspect component to the composition of Aorist and Imperfect, as some have supposed, nor does it impose a strict temporal requirement, as is commonly held, but rather the verbal base itself is responsible for the encoding of tense and/or aspect.

After locating the portion of the verb responsible for encoding aspectual contrasts (§3), I then investigate the extent to which the Aorist indicative (with or without augment) can be said to encode perfective aspect and what precisely this means in terms of the synchronic grammar of Homer and how it relates to cross-linguistically motivated tense–aspect categories (i.e., to which gram type can the Aorist be said to belong?) (§4). I pursue the same line of inquiry for the Imperfect (§5): To what extent can it be said to be a past imperfective in Homer, how is this borne out in the synchronic grammar, and how is it to be situated in the classification of

typologically motivated tense–aspect categories? I will show that while the Homeric Aorist does indeed express perfective aspect, its usage is in line with a typologically motivated category that falls somewhere between perfect and perfective aspect on the typical grammaticalization pathway known as “aoristic drift.” Similarly, while the Homeric Imperfect can express imperfective aspect, its semantic range is in fact a good deal broader than common definitions of imperfective aspect typically allow, being used regularly to sequence events in past narration and having other uses that are more characteristic of perfective aspect than imperfective. I therefore assign it a semantics that suits its functional range in Homer, assuming it to be aspectually neutral (i.e., neither perfective nor imperfective, but allowing either interpretation based on context and other pragmatic considerations) and identify it with the typologically motivated category known as “simple past tense.” I then compare the Aorist and Imperfect (§6) to discern, concretely, what the difference between them is in terms of actual Homeric usage. Lastly, I include a brief chapter on the Perfect and Pluperfect (§7), so that their place in the verb system and possible points of interaction with the Aorist and Imperfect may be observed.

CHAPTER 3

The augment in Mycenaean and Homeric Greek

3.1 The augment in Mycenaean

The augment in Mycenaean Greek (c.1400–1200 BCE) is a complicated topic, which is treated more fully in my discussion of Myc. *o-/jo-* ‘thus’ (Hollenbaugh 2020d). The striking lack of augment from the Aorist indicatives found in the Linear B documents is enough to show that, whatever the augment’s function might have been at this stage, it was not marking past tense. The augmentless Aorist indicatives of Mycenaean are regularly past referring (Delgado 2016:168), as in (17a). Here the runtime of the event referred to by the augmentless Aor. *wi-de* ‘made inspection’ (Hmc. ῑδε) must precede the utterance time, since it is restricted by the temporal clause that begins with *o-te* ‘when’ and hence has a concentrative interpretation. This temporal clause contains yet another augmentless Aorist (*te-ke* ‘appointed’) which must be contemporaneous with or precede the action of the main verb (i.e., it has either a concentrative or a counter-sequential reading). (17b) is one of the very few probable examples of an Imperfect in Mycenaean. If correctly interpreted, it shows that the augmentless Imperfect also had past reference at this stage (representing /ehento/ < **es-ento*, cf. *DMic*:124). It can thus be said, minimally, that the augment was not required for referring to past time in Mycenaean.

(17) PAST-REFERRING AOR. (a) AND IPE. (b) IN MYC.: NO AUGMENT

- a. *o-wi-de* , *pu₂-ke-qi-ri* , *o-te* , *wa-na-ka* , *te-ke* , *au-ke-wa* , *da-mo-ko-ro* ... (PY Ta 711, two more lines).

‘Thus P. **made inspection**, on the occasion when the king (**had?**) **appointed Augewas** to be a *damokoros*...’.

- b. ... *do-qe-ja* , *do-e-ra* , *e-qe-ta-i* , *e-e-to* ,

te-re-te-we /woman/ 13... (PY An 607.3–4, four more lines).

‘? slave-women **were** attendants for ?: 13 women’.

Yet the augmentless Aorist may also have present reference time ($t_A \supseteq t_S$),²⁷ as shown in (18). Crucially, however, the augmentless Aorist shows a functional range firmly within the domain of the perfect or perfective aspects. Thus it often favors a resultative interpretation, as in (18a), where the Aor. *ra-ke* /lakhe/ ‘has been allotted’ (= alphabetic Gk. λάχε to λαγχάνω ‘obtain by lot’) follows the Present indicative [*e-*]ke /eke/ (= alphabetic Gk. ἔχει) ‘holds’, suggesting present time reference. With *o-/jo-* ‘thus’, however, the augmentless Aorist seems most often to have a performative-reportive function, as in (18b), where the verb occurs at the beginning of the tablet, directly after *o-*, which I take to mean ‘hereby’ in this function (cf. Hollenbaugh 2020d, but see differently Probert 2008). Both of these functions are characteristic of perfect(ive) aspect, and examples of this kind may be taken to suggest that the augment was not required for indicating perfect(ive) aspect in Mycenaean Greek.

(18) RESULTATIVE (a) AND PERFORMATIVE (b) AOR. IN MYC.: NO AUGMENT

- a. [*e-*]ke-qe, ka-ma, o-na-to, si-ri-jo-jo, **ra-ke**, to-so, pe-mo... (PY Ep 613.10, three more lines).

‘(And) he holds the lease of a *kama*; he **has been allotted** (that) of *Sirios*, so much seed’ (cf. Docs²:262).

- b. 1 *o-do-ke, a-ko-so-ta*
2 *tu-we-ta, a-re-pa-zo-o*
3 *tu-we-a, a-re-pa-te* [[ze-so-me]]
4 *ze-so-me-no* [[ko]]
5 *ko-ri-a₂-da-na* AROM 6... (PY Un 267, three more lines).

‘A(r)xotas thus (i.e., hereby) **contributes** spices to Thuestas the unguent-boiler, for unguent which is to be boiled: coriander seed 720 l.’²⁸

In addition, when compared beside the Present to the same verb in a similar function, it is

27. These temporal parameters are explained in Chapter 2 above.

28. For an alternative interpretation see Willi 2018:391.

possible to see an aspectual distinction maintained between the two stems, even in the absence of the augment, as shown in (19).

(19) CONTRASTIVE ASPECT IN MYC.: AOR. (a) AND PRES. (b)

a. *jo-o-po-ro*_[AOR.] , *a-ro-mo[-ta do-]si-mi-jo* ... (MY Ge 602, six more lines).
 ‘They are hereby indebted/have become indebted_[AOR.] (with respect to) spice(s) as a result of the tax’.

b. *o-o-pe-ro-si*_[PRES.] , *ri-no* , *o-pe-ro* ... (PY Nn 228, six more lines).
 ‘They thus/hereby (continue to) owe_[PRES.] as a deficit/remaining balance linen’.

In (19a), the aorist is accompanied by an explicit statement of result, emphasizing the change-of-state, which is inceptive (i.e., ‘hereby *come to owe* in consequence of the tax’). In (19b), the present is accompanied by a ‘deficit’ or balance that *still remains to be paid*. So the state of “owing” can be thought of here as a continuation of some prior debt. If this interpretation is correct, then (19) suggests that the aspectual opposition between the Present and Aorist stems is maintained in Mycenaean even when they have the same time reference. Thus, nothing about the Aorist’s distinctive functional character depends necessarily on the notion of past reference.

It may be supposed nonetheless that, even if the augment is not required for indicating past tense or perfective aspect, its presence may *entail* these things. There is, of course, very little to go on by which to evaluate this hypothesis, but what there is seems to speak against such an entailment, both with respect to temporal reference and with respect to aspect. As regards temporal reference, I cite one probable example of an augmented Aorist in (20).²⁹

(20) RESULTATIVE AOR. IN MYC.: WITH AUGMENT

ko-ka-ro , *a-pe-do-ke* , *e-ra₃-wo* , *to-so*
e-u-me-de-i /olive oil/ + WE 18
pa-ro , *i-pe-se-wa* , *ka-ra-re-we* 38 (PY Fr 1184).

29. Of course, there are no certain cases of augmented forms in Mycenaean, and *a-pe-do-ke* could be interpreted as augmentless /apedōke/ (= ἀπ-έχ-δωκε). However, ἀπεχδίδωμι is barely attested in alphabetic Greek, where it mostly means ‘hire, contract, relet’, as well as ‘give in marriage’ (LXX Tob. 3:8), but none of these meanings seem to suit the context of (20). By contrast, ἀπέδωκε occurs in the *Iliad* (4.478=17.302) in the sense ‘repaid’. It thus seems to me most straightforward to assume that *a-pe-do-ke* in (20) represents augmented /apedōke/ (= Hmc. ἀπέδωκε) (cf. discussion in *DMic*:126–7).

‘*Kokalos* **has repaid** the following quantity of olive oil for anointing to *Eumedes*: 648 l. of oil. From *Iipsewas*, thirty-eight stirrup jars’.

The nature of the Linear B tablets is ordinarily to document what has been paid and what is owed or outstanding. Thus, the augmented Aor. *a-pe-do-ke* in (20) naturally lends itself to a resultative interpretation (cf. Willi 2018:391): At the time of the making of this document, *Kokalos* *has repaid* olive oil in the specified quantity.

A minimal pair is given in (21) consisting of the augmented Aor. *a-pe-e-ke* and the augmentless Aor. *a-pi-e-ke* (if both taken to the same verb that gives alphabetic Greek ἔημι ‘send’, plus the prefix /apo-/ ‘away’ and /amphi-/ ‘around’ respectively).

(21) AOR. WITH (a) AND WITHOUT (b) AUGMENT IN MYC.

a. *ro-o-wa*, *e-re-ta*, *a-pe-o-te*,

me-nu-wa, ***a-pe-e-ke***, ... (PY An 724, twelve more lines).

‘In *Rohowa* the rowers (are) absent. *Menuwas* **has discharged/released** (them?)’.³⁰

b. *pa-ki-ja-si*, *mu-jo-me-no*, *e-pi*, *wa-na-ka-te*,

a-pi-e-ke, *o-pi-te-ke-e-u* ... (PY Un 2, four more lines).

‘Upon the lord being initiated in *Sphagiānes*, the overseer-of-*teukhea* **sent around** (various goods)’.³¹

In this case, the augmentless Aorist occurs in what appears to be a presential context, after the Present participle *a-pe-o-te* ‘being away’. The second line, under my interpretation, gives the reason that they are away, namely because *Menuwas* has sent them away. The verb *a-pe-e-ke* can thus be taken as having a resultative value with present reference. By contrast, the event referred to by the augmentless Aorist in (21b) seems to be located in the past, fixed in time by the participial phrase dependent on *e-pi* (+ dat.) ‘in the time of’ (see *Docs*²:221): On some occasion

30. For my interpretation of *a-pe-e-ke* as /ap-e-hēke/ (cf. Hom. ἀπέρχε, Aorist to ἀφίημι ‘send away/forth’) see *DMic*:127. Other possible interpretations include: Aor. /amph-e-hēke/ ‘sent around’ (cf. *DMic*:128), Ipf. /ap-e-(h)ekhe/ ‘kept away’, or a Present or Imperfect to /amp-ékhō/ (ἀμπ-έχω) ‘enclose’ (*Docs*²:187). *a-pe-e-ke* occurs twice more in PY An 724, in lines 5 and 7, though the context is not sufficiently understood to shed light on whether these occurrences of *a-pe-e-ke* are the same or different in time reference from the first occurrence seen in (21a).

31. The interpretation of *a-pi-e-ke* is uncertain. My interpretation of it as /amphi-hēke/ (Aorist to an */amphīēmi/ (*ἀμφίημι) ‘send around’) is only one of several possibilities (cf. *DMic*:127). Others include: Pres. /amphi-(h)ekhei/ ‘encloses’ (*DMic*:137) and Aor. /aph-(h)iēke/ ‘consecrated’ (cf. *Docs*²:441, 532).

in the past, the *opiteukheeus* sent the following provisions (barley, flour, olives, etc.). It should be noted, however, that these interpretations are just two of the numerous possible ways of reading these tablets. Nonetheless, if one takes *a-pe-e-ke* in (21a) as an example of an augmented Aorist, it is difficult to maintain that the augment is incompatible with present reference time. Taken together with (20), the evidence seems to suggest that the augment in Mycenaean did not entail past reference.

As regards aspect, one of the few likely occurrences of the Imperfect seems to show that the augment was not restricted to perfect(ive) aspect. If *a-pe* is taken to be /ap-ēs(t)/ ‘was away’,³² then (22) shows that the augment is compatible with continuous-state interpretations (i.e., imperfective), such that $t_E \supset t_A$ (notation explained in Chapter 2 above).

(22) AUGMENT WITH CONTINUOUS-STATE READING OF THE IPF. IN MYC.

e-ta-je- u, te-ko-to(-) a-pe /man/ 1 (PY An 5, seven more lines).

‘*Etaieus* the carpenter **was away**: 1 man’.

It therefore seems unlikely that the augment was restricted either to past reference or to perfective aspect in Mycenaean. This being the case, I assume that the opposition was between aspectual stems (Present vs. Aorist) and that the perfect(ive) aspect of the Aorist was inherent to the base and not attributable to the augment. Further, these verbal bases (viz. the Imperfect and Aorist indicative) were regularly compatible with past interpretation even in the absence of the augment (see (17) above), indeed especially without it, if (17a) and (21b) are any indication, as contrasted with the present-referring augmented Aorists in (20) and (21a).

From the perspective of Classical Greek, it is perhaps surprising to find that the augmented forms are dispreferred in contexts of past reference. Yet from a Homeric perspective it is entirely expected, as this is precisely the distribution we find in Homer, where the augmentless forms significantly outnumber the augmented ones in past narration (Chantraine 1948 [2013]:484), a matter which I examine in the next section.

32. Though *a-pe* is usually assumed to be augmented (cf. *DMic*:128), it could technically reflect an augmentless /ap-es(t)/ ‘was away’, since in the Linear B script this would be written the same as augmented /ap-ēs(t)/ < /ap-e-es(t)/.

3.2 The augment in Homer

Having demonstrated, to the extent possible, that the augment does not mark tense or aspect in Mycenaean, I turn now to Homer. The primary goal of this section is to show that the augment does not mark tense or aspect at this later stage of the language either (c.800–700 BCE). Though I focus here on the Homeric epics proper (*Iliad* and *Odyssey*), the observations made hold in general for the Homeric Hymns (*HH*) and Hesiod (*Hes.*) as well, which show a number of features that are suggestive of a somewhat later stage of linguistic development (cf. Hollenbaugh 2021b:§5.4 for details pertinent to tense–aspect). What emerges clearly is that, at all linguistic stages, tense and aspect are properties of the verbal bases themselves and not of the augment. This fact remains true as long as it is clearly observable, until at least Pindar (*Pind.*), after which time the augment becomes an obligatory part of the formation of the Aorist and Imperfect (and Pluperfect) indicative.

That the augment does not mark past tense in Homeric Greek has long been demonstrated (Platt 1891, Drewitt 1912:44, among others). Though the distinctive function of the augment is difficult to see on a case by case basis, when one looks at its general distribution unmistakable patterns emerge. We may note the following functional tendencies (Drewitt 1912:44, Bakker 2005, Willi 2018:359–71).

- i. The Aorist in similes and gnomes is regularly augmented. The term *gnomic* refers to a verb used to express universal or timeless truths. This includes the similes characteristic of epic language:

(23) ὥς τε λέων ἐχάρη_[AOR.] μέγῳ ἐπὶ σώματι κύρσας...

μᾶλα γάρ τε κατεσθίει_[PRES.] (*Il.* 3.23–5).

‘As a lion **is seized with joy**_[AOR.] when he comes upon a large carcass... he devours_[PRES.] it eagerly’ (ex. and tr. Wackernagel 1926–8 [2009]:232).

Here the augmented Aorist occurs alongside the Present indicative, both having a generic or habitual interpretation and differing only in aspect (the Aorist is inceptive), on which see Wackernagel 1926–8 [2009]:232.

- ii. The augmented Aorist is found regularly in “perfect-like” contexts (e.g., with νῦν ‘now’):³³

(24) νῦν μὲν γάρ Μενέλαος ἐνίκησεν σὺν Ἀθήνῃ (Il. 3.439).

‘This time Menelaus **has beaten** me with Athena’s help’.

The kinds of contexts that favor such an interpretation arise most commonly in direct dialogue (they are virtually non-existent in narrative proper, except in anterior contexts of the type ‘when so-and-so *had done* such-and-such’). The reading is thus especially frequent in the first and second persons.

- iii. The augment is regular on the Aorist in contexts of future reference (Wackernagel 1926–8 [2009]), called the “futurate” use (see §4.3 below, item 13.):

(25) FUTURATE AORIST INDICATIVE IN HOMER

a. εἰ μὲν κ’ αὖθι μένων Τρώων πόλιν ἀμφιμάχωμαι,

ὦλετο_[AOR.] μὲν μοι νόστος, ἀτὰρ κλέος ἄφθιτον ἔσται_[FUT.] (Il. 9.412–3 ≈ 414–6).

‘If I stay here and fight around the city of the Trojans,
then my return home **is done for**_[AOR.] but immortal fame will be_[FUT.] mine’.

b. εἴ περ γάρ τε καὶ αὐτίκ’ Ὀλύμπιος οὐκ ἐτέλεσσεν,

ἔκ τε καὶ ὁψὲ τελεῖ_[FUT.], σὺν τε μεγάλῳ ἀπέτεισαν_[AOR.] (Il. 4.160–1).

‘For even if indeed the Olympian has not accomplished it straightaway,
he will accomplish_[FUT.] it completely even late on, and then they **will pay**_[AOR.]
together with a heavy price’ (ex. and tr. *ibid.*:228).

In such cases, according to Wackernagel (1926–8 [2009]:229), the Aorist is used “to denote a factual, absolutely certain occurrence”.³⁴

- iv. Narration can occur within direct speech (“speech-narration”) or outside of it (“narrative proper”). The augment is regularly omitted in contexts of narrative proper:

33. On the term “perfect-like” see Section 2.3 above.

34. The augmented Aorist may have a similar function in Vedic, on which see n.152 in §9.3 below.

(26) ἰστία μὲν **στεῖλαντο**, **θέσαν** δ' ἐν νηϊ μελαίνῃ (*Il.* 1.433).

‘They **drew** the sails, then they **put** them in the black ship’.

- v. Drewitt (1912:44) notes further that the augment in Homer is commoner overall in speech-narration than it is in narrative proper. Crucially, however, this increased frequency is very slight in the earliest parts of the *Iliad* (and not statistically significant),³⁵ whereas in the later parts of the *Iliad* and especially in the *Odyssey* “there is a striking change; among true past aorists in speeches we find an enormous rise in augmentation” (ibid.:44). It seems, then, that the augment is disfavored in narration generally, but in the linguistically later portions of the epics this dispreference gives way to a more dominant preference in favor of the augment in quoted speech (whether in speech-narration or simple dialogue).³⁶

- vi. The augment is regularly lacking from the Imperfect, as in (27) (repeated from (1) above):

(27) AUGMENTLESS IMPERFECT IN HOMER

Ἀτρεὺς δὲ θνήσκων ἔλιπεν_[AOR.] πολύρηνι Θυέστῃ,
αὐτὰρ ὁ αὔτε Θυέστ' Ἀγαμέμνονι **λεῖπε**_[IPE.] φορῆναι (*Il.* 2.106–7).

‘And Atreus, upon his death, left_[AOR.] (the scepter) to Thyestes rich in flocks, and
Thyestes in turn **left**_[IPE.] it for Agamemnon to bear’

35. With respect to speech-narration vs. narrative proper, Drewitt’s (1912) figures for Aorists in the earliest portions of the *Iliad* are as follows: augment in speech-narration, 71; no augment in speech narration, 159; augment in narrative proper 543; no augment in narrative proper, 1537. Applying a Fisher’s exact test (cf. §1.10 above) to Drewitt’s (1912) raw data shows that quoted speech is not a strong indicator of augmentation at this stage ($p = 0.13$). By contrast, considering his data for the later parts of the *Iliad* and the *Odyssey* shows a statistically significant correlation between augmentation and quoted speech at these later stages of epic language (respectively, $p = 0.04$ and $p < 0.00001$).

36. With respect to “perfect-like” vs. preterital (=terminative/counter-sequential) readings of the Aorist in direct speech, Drewitt’s (1912) figures for Aorists in the earliest portions of the *Iliad* are as follows: augmented “perfect-like,” 197; augmentless “perfect-like,” 119; augmented preterital, 71; augmentless preterital, 159. Applying a Fisher’s exact test to Drewitt’s (1912) raw data shows a statistically significant correlation between augmentation and an Aorist having a “perfect-like” or preterital interpretation at this stage ($p < 0.00001$). Thus the later layers of epic language show a correlation between quoted speech and augmentation (cf. n.35 above), while the earliest layer shows a correlation between “perfect-like” usage and augmentation. This implies a diachronic change from pragmatically driven usage in the first instance (quoted speech is not a sufficient condition for augmentation) to a mere discourse association later on (quoted speech is a sufficient condition for augmentation even in speech-narration).

According to Drewitt's (1912) figures, only about 23% of Imperfects are augmented in the *Iliad* (398 out of 1746); in the *Odyssey* the Imperfect is augmented about 27% of the time (284 out of 1058); in both epics together the figure is about 24% (682 out of 2804). The most probable reason for this is that the Imperfect is used regularly in narrative contexts (both speech-narration and narrative proper), as discussed below.

vii. Iteratives (so called) in -σκ- are virtually never augmented. This is true of those built to Aorist stems as well as those built to Imperfect stems. For example:

- Aor. φύγεσθε 'would escape' (e.g., *Il.* 17.461).
- Ipf. φεύγεσθην 'would withdraw' (e.g., *Od.* 17.316).

viii. The Pluperfect is rarely augmented in Homer (see, e.g., Willi 2018:363), as in βεβλήκει 'struck, smote' (e.g., *Il.* 5.66) and βεβήκει 'went' (e.g., *Il.* 1.221).

ix. The augment is disfavored under negation (Bakker 2005:126–7). In particular, the gnomic Aorist (including similes), which is regularly augmented, is seldom negated (Wackernagel 1926–8 [2009]:231), with examples especially scarce in Homer (at least one occurs at *Il.* 17.676: οὐκ ἔλαθε 'does not escape the notice of').³⁷ In epic similes, most often a Present, Perfect, or subjunctive under negation stands in contrast to an affirmative Aorist (e.g., *Il.* 5.139, 12.45–6, 12.304–6). For a typological parallel see n.122 in §8.2 below.

x. Introductions and conclusions to speeches (hereinafter *speech tags*) are more often augmented than not. Speech tags are phrases of the type ὦς ἔφατ' vs. ὦς φάτο 'thus (s)he spoke'. While these show a clearly phonological distribution—the former before a word beginning with a vowel, the latter before a consonant—the augmented variant is found to have an unexpectedly high rate of occurrence. Of the speech tags in the *Iliad*, for instance, 167 (about 45%) are required by the meter, 62 (about 17%) are ruled out by the meter; the remaining 142 are metrically uncertain (about 38%) (Bakker 2005:122). This goes against the typical tendency for verbs in narrative to lack the augment (cf. Willi 2018:371).

37. Post-Homeric examples of negated gnomic Aorists include: Pind. *Nem.* 11.37, Soph. *El.* 25–6, Xen. *Mem.* 2.4.7, Plat. *Laws* 4.720d.

It has often been claimed that the augmentless forms in epic Greek are a poetic license drawing on an archaic grammatical feature (cf., e.g., Willi 2018:359). However, Drewitt (1912) concludes just the opposite: Given that the augmentless forms are plainly original in past narration, it is rather the augmented forms that are used *metri gratia* in narrative contexts. Later in the transmission of the epics, he claims, the augment was added everywhere the meter would allow, and this makes it *look* like the augmentless forms were a poetic license, when in fact they were not.

What can be observed here is that the augment's distribution in Homer was non-random and meaningful. Though its meaning cannot be easily determined from any single occurrence, it can be discerned on the basis of its patterns of distribution. That the augment does not mark past tense follows necessarily from items i., ii., and iii. above—a fact first clearly stated by Platt (1891:225). Thus it cannot be said that the augment entails past time, nor, given items iv.–x., that past time reference entails the augment. This does not, however, exclude the possibility of the augment being a marker of some other tense, and indeed Platt (1891:225) himself adopts the view that the augment was a marker of present time reference—a hypothesis assumed by a number of scholars since, including Drewitt (1912:44). Bakker (2005:127) comes to a similar (but not identical) conclusion, viewing the augment as indicating “immediacy in time and space.”

Bakker (2005:127) says that the augment is “a deictic suffix marking an event as ‘near’ with respect to the speaker’s present and immediate situation”. For Bakker (2005:127), “[t]he augment marks not so much present tense as *presence*: closeness, positive, observable occurrence.” The benefit of this treatment is that it readily accounts for the augment’s association with present reference (e.g., the perfect-like and gnomic uses of the Aorist), which is naturally favored in dialogue (quoted speech) and disfavored in past narration. However, several problems arise from this assumption. First, the augment does occur on the Imperfect and Pluperfect, albeit less frequently than on the Aorist. As these forms seldom have present reference, it is difficult to see why they would *ever* be augmented if the augment indicates “immediacy in time and space” (ibid.). The augment’s frequency in speech tags (whether Imperfect or Aorist), which uniformly refer to events located in the past, also finds no satisfactory explanation on this account (see ibid.:128 and cf. discussion in Willi 2018:375). By the same reasoning, the augment’s

prevalence in “futate” contexts seems just as problematic as its occurrence on forms referring to the past, since both the past and the future entail some distance in time from the speaker, rather than nearness. On the other hand, the augment is never found on the Present indicative, where one might expect a deictic of “immediacy” to be most at home. Finally, as Willi (2018:380) observes, it is far from clear what kind of diachronic trajectory a marker of immediacy or (by Platt’s (1891:225) account) present tense could go through so as to become an obligatory part of past-tense formation in post-Homeric Greek. How does a marker of present or immediate time reference come to be an integral part of the *past* tenses? Typologically, this would seem to be a serious problem for Bakker’s (2005) and Platt’s (1891:225) accounts. Moreover, it is apparent from the foregoing discussion that the augment does not entail present time reference or near temporal deixis, as it occurs on verbs clearly referring to events located in the remote past, as seen in (27) above (ἐλπίεν ‘left’). Conversely, the use of the augment is not guaranteed by contexts of present reference/immediate past, as shown by the fact that the augment is not always found on the Aorist in its “perfect-like” functions³⁸ and is never found on the Present indicative.

In part as a reaction against accounts which view the augment as a marker of past or present reference, Willi (2018:381–6) puts forth an alternative hypothesis, proposing instead that the augment is a “signal” of perfective aspect. The details of Willi’s (2018) analysis need not be recounted here, but essentially he proposes that the augment originated as a reduplicating syllable of the reduplicated Aorist, from which it was extracted as a marker of perfective aspect. He refers to the augment’s contribution to the semantics of the Aorist and Imperfect in terms of markedness (ibid.:381), saying that “the augment *originated* as a perfectivity marker” (ibid.:384, emphasis original), which later was “reinterpreted as a past-tense signal” (ibid.:381). As just noted, this avoids the problems of viewing the augment as a marker of past or present tense, while having the added advantage of explaining why the Aorist seems to have a special affiliation with the augment, over and above the Imperfect and Pluperfect, which most typically lack

38. In the first book of the *Iliad* alone are no less than 9 occurrences of “perfect-like” Aorists that are metrically assured to lack an augment (out of a total of 30 securely interpreted “perfect-like” Aorists): ἔρεψα ‘have (ever) roofed over, constructed’ (1.39), εἶπες ‘have (not ever yet) spoken’ (1.106, 108), ἵδον ‘(never yet/since) have seen’ (1.262), ἔχουσα ‘have heard’, τιμήσας ‘have honored’ (1.454), ὄνησα ‘have profitted, have helped’ (1.503), συμψάσασατο ‘has taken counsel with’ (1.540), ῥίψε ‘has thrown thrown (me before now)’. See further n.105 and cf. (76b) below.

the augment. It also provides a neat diachronic trajectory for the development of the meaning of the augment from a marker of perfectivity to a marker of past tense (a typologically unproblematic grammaticalization path).

It should be noted, however, that it is difficult to get a handle on exactly how Willi (2018) conceptualizes the semantics of the augment. On the one hand, he speaks of it as a “marker” of perfectivity (ibid.:381, 384), which presumably means that it entailed perfectivity, yet he observes that it is avoided in past sequential narration (what I will call “terminative” usage) while favoring “resultative” and gnomic functions (see below). It thus seems to be the case that he thinks of the augment as a morpheme that entails perfectivity but has “resultative implicatures” (ibid.:391). Still, it is not clear what exactly is meant by describing the augment as a “signal” of perfectivity (entailment? implicature?), as he repeatedly qualifies it (ibid.:60, 207, 381–2). This lack of precision makes his account difficult to respond to in absolute terms. Nonetheless, while I must disagree that the augment is a marker of perfectivity (in the sense that it entails perfectivity), it certainly does have “resultative implicatures,” along with a number of other implicatures (see §4). Yet I have argued that these implicatures are derived secondarily from what in my view is the original value of the augment as an adverbial element with an evidential meaning (see Hollenbaugh 2020b and §8.2 below). The existence of its resultative implicatures therefore does not presuppose that the augment was a marker of perfectivity, whether in Homer or prehistorically.

On the whole, Willi’s (2018) hypothesis generates a whole new set of problems to be explained which under prior accounts had been unproblematic. For one thing, as just mentioned, the augment is specifically avoided in past sequential narration, the context cross-linguistically most typical of perfective aspect markers (E. Dahl 2010:78, Ö. Dahl 1985:81–4). Even if the augment has “resultative implicatures” (see above), it is fundamentally odd that a marker of general perfectivity would be largely *restricted* to just its presential uses (resultative and gnomic)—a restriction more characteristic of resultative or perfect aspect markers (cf. Bybee et al. 1994:54, where “anterior” = perfect). By contrast, if the Aorist itself is viewed as a marker of perfectivity (a largely uncontroversial assumption), the addition of the augment as an implicature-bearing element that restricts it to a certain subset of its interpretations (as I will argue below) would be

typologically and semantically unremarkable.³⁹

The avoidance of the augment in sequential narrative contexts would thus seem to be a serious problem for Willi's (2018) account, yet he dismisses it with very little argumentation (ibid.:381–2). He points out that some languages use imperfective grams in past sequential narration, yet none of the typological parallels he cites have been proven to denote imperfective aspect, *per se*.⁴⁰ His invocation of Mandarin Chinese, for instance, relies on the fact that the “perfectivising” particle *-le* is “optional” in narrative contexts; yet the absence of a perfective marker does not an imperfective make, and the comparison—mentioned as it were in passing—lacks any of the kind of detail that would make it compelling. Moreover, typological parallels are useful as supporting arguments to make one's analysis seem more plausible. They must never be used *in lieu* of argumentation based on the facts of the language in question. Yet no such argumentation is put forward, and the burden of proof thus remains firmly on Willi to explain why the augment, if it was a perfective marker, is avoided in narration in Homer.

Next, Willi (2018:384–5) must explain why the augment is never found on modal and non-finite forms. If it is a perfectivizer, and Greek systematically marks aspect throughout its modal and non-finite paradigms, surely we should see this overt perfective morpheme showing up on

39. Compare, for instance, the word *qad* in Arabic, which combines with the Perfective to express perfect meanings (Cuvalay-Haak 1997:150; Comrie 1976:81). A similar function has been observed for the presentative particle *hinnēh* + Perfective in Biblical Hebrew (Sellami 2020).

40. What Willi (2018:382) calls “the *waw*-imperfect” in Hebrew (also known as the “consecutive imperfect”) is historically a preterite, by some classified as a perfective gram (i.e., the “prefix conjugation,” cf. Akk. *iprus* ‘he cut’, Arab. *lam yaqul* ‘he did not say’; see Al-Jallad 2018:317, Kouwenberg 2010:126, 129–32), and there is a formal distinction between verbs that occur with *waw* and those that do not still detectable in Biblical Hebrew for certain classes of verbs. Thus, while verbs like **yaqtul* and **yaqtulu* merge in Hebrew as *yiqṭōl* (KILL.Ipfv.3m.sg.), some maintain a formal distinction, such as **yaqūm*, which gives Heb. *yaqōm* (STAND.jussive.3m.sg.), whereas **yaqūmu* gives Heb. *yaqūm* (STAND.Ipfv.3m.sg.). Crucially, only the former (*yaqōm*) can occur after *waw* (*wa-yyaqom* ‘he stood up’). Moreover, the presence of *waw* affects the meaning of the verb, rendering Imperfectives perfective and Perfectives imperfective. In what sense, then, is the Imperfective + *waw* an imperfective at all? I thus find Willi's mention of the “the *waw*-imperfect” extremely misleading. Similarly misleading is his invocation of “the generalisation of the imperfect, not the aorist, as a narrative tense in classical Sanskrit.” The Imperfect was the default tense of narration since the *Rgveda* (Hollenbaugh 2018:19–28) and by all accounts does *not* represent an imperfective gram (see E. Dahl 2010:260–1, which I follow). Moreover, the Perfect appears to be the main tense of sequential narration in Epic Sanskrit and at least some Vedic prose texts (Hoose 2020, 2021; Whitney 1889:296). Finally, the Czech past Imperfective does indeed permit use in sequential narration, as in other western Slavic languages (Dickey 2015; 2000; 1997:90–115), for which reason I have argued (Hollenbaugh 2021b:\$3) that it does not represent an imperfective gram at all but rather a simple past tense (denoting neutral aspect), similar (but not identical) to the Imperfect in Sanskrit.

such forms from time to time? Yet we do not, and Willi's explanation is again rather dismissive. His claim is that the non-indicative forms "disfavoured extra perfectivity marking at the outset" (p.385). His reason for this seems to be that the subjunctive (for example) was "semantically indeterminate by definition" (p.353), so an "emphatically perfective, augmented form would have been out of place" (p.354). As far as I can see, there is no strong support for this assumption, and I see no reason why the subjunctive (or any other) mood should be averse to perfective marking, especially seeing as there *are* perfective modals in many languages, including Greek (to say nothing of non-finite forms). He claims that the augment was "eventually" restricted to past-referring verbs, which naturally excludes the non-indicative forms, but this only defers the question to a pre-stage of the language and leaves the problem unresolved.

Most problematically, Willi (2018:185–9) is compelled to explain why the augment, if it is a perfective marker, occurs on the Imperfect at all—which it does about as often as on the Aorist in narrative contexts (i.e., roughly a third of the time). He does this by suggesting that the augmented Imperfects are "perfectivised" imperfectives (citing one example), while augmentless Imperfects are simply imperfective (citing two examples).⁴¹ He is quickly forced to admit, however, that the predicted meanings do not hold up to the attestations, since we have many examples of augmented Imperfects with clearly imperfective meanings (progressive, continuous-state, or habitual). I would add that we likewise have many augmentless Imperfects with perfective meanings (concentrative, complexive, etc.), as discussed below.

Willi (2018:387) claims that "a statistical verification is impossible" due to the difficulty of deciding on which function the Imperfect has on any particular occurrence. While I am only too familiar with just how difficult it can be to decide on particular readings in every case, I do think we can get a better idea of the facts by looking at more data than Willi has presented. Using my corpus of the first book of the *Iliad*, which is coded for usage values based on context, allows us to see just how often the Imperfect has perfective or imperfective meanings with and without the augment. As stated in Chapter 1, I do not claim that my interpretations of every occurrence of every verb are definitive, but given enough data dubious readings on a case-by-

41. If imperfectives can be "perfectivised," we might equally well wonder why the Present and Future indicative never show up with the augment, but this is not addressed by Willi.

case basis matter less, and the statistical trends speak much louder than the limitations of the analyst. Thus, as it turns out, I can say with a high degree of confidence that the augmented Imperfects in *Iliad* 1 show no special propensity for perfective⁴² readings. Excluding speech tags (which tend to have the augment for their own mysterious reasons) and looking only at metrically assured augmentation/lack of augmentation, the augmented Imperfect shows perfective (terminative) readings 58% of the time (11 out of 19) in the first book of the *Iliad*. Yet the Imperfect without the augment is perfective 44% of the time (22 out of 50). Applying a Fisher's exact test to the raw data suggests that augmentation of the Imperfect is not a strong indicator of perfectivity ($p = 0.42$). For a further discussion of the lack of correlation between augmentation and perfectivity in Homer see Section 5.3 below.

In sum, it cannot be the case that the augment entails (or even implicates) perfective aspect, given that it occurs regularly on Imperfects with progressive and habitual interpretations. Likewise, it cannot be the case that perfective meaning requires the augment, seeing as the Aorist in its most characteristically perfective interpretations (concentrative-sequential) tends *not* to have the augment. There is thus no meaningful sense in which the augment is a perfectivizer in Homer, and in the absence of positive evidence its status as a perfectivizer at some prehistoric stage of the language remains purely speculative. I therefore conclude that, whatever the augment's function might have been, it was not responsible for contributing aspect in the derivation of the verb, just as it was not responsible for contributing tense.

If the augment was not responsible for contributing the meanings of tense or aspect, then it must be the case that these meanings were inherent to the verb independent of the augment. For this reason, I assume that the temporal and aspectual behaviors observed for the Aorist and Imperfect in Homer are in general attributable to these functional categories themselves and not to the augment. This is not to say that the augment has no effect on verbal meaning (the various distributional facts speak strongly against this), but it is the case that nearly all readings available to the Aorist and Imperfect with the augment are also available without it and vice versa. The sole exception to this is the Aorist used in gnomic and similes (hereinafter *gnomic*),

42. I.e., terminative, see §2.4 above.

which virtually requires the augment (cf. Platt 1891:217–21; Chantraine 1948 [2013]:468; Bakker 2005:121; Willi 2018:368–9). The augment may, albeit rarely, be omitted in “perfect-like” functions of the Aorist (i.e., resultative, experiential, etc.), as shown in (28) (cf. n.38 above for further examples).

(28) AORIST RESULTATIVE (a) AND EXPERIENTIAL (b): NO AUGMENT

- a. πολλοὶ δὲ καὶ ἄλλοι
 υἱεὶς ἐνὶ μεγάρῳι ἦμὲν **τράφεν** ἡδ’ ἐγένοντο (*Od.* 14.200–1).
 ‘And many other sons likewise **have been born** and raised in his palace’
- b. πολλάκι γάρ σεο πατρός ἐνὶ μεγάροισιν **ᾔκουσα** (*Il.* 1.396).
 ‘For often I **have heard** you in the halls of my father’.

Though Platt (1891:221–6) has shown conclusively that the augment strongly correlates with the “perfect-like” interpretations of the Aorist (found uniformly in speeches), in light of the numerous counter-examples it cannot be said to “mark” present reference or perfect(ive) aspect, as discussed above. The correlation between “perfect-like” interpretations and augmentation of the Aorist can at most be taken to mean that the augment draws out or specifies a particular reading within the domain of readings independently available to the Aorist. That is, the Aorist indicative (independent of augmentation) has a certain functional range which allows for a particular set of possible interpretations to be decided upon on the basis of discourse context, lexical item, and various other pragmatic factors. The augment implicates a narrowing of that set, such that a subset of the readings available to the Aorist is understood to be more likely or more accessible when the augment is used than when it is absent. Thus, when a speaker uses the augment, the hearer can be reasonably confident that some special meaning is intended beyond the most typical interpretations associated with the Aorist (terminative, sequential). This amounts to saying that the augment is an adverbial element that carries a conventionalized implicature (not an entailment). As such, the implicature can be overridden, as when augmented Aorists occur in sequential narration. On the other hand, the absence of the augment cannot be taken to rule out any of the readings within the functional domain of the Aorist (or Imperfect), as seen when augmentless Aorists have “perfect-like” interpretations.

The gnomic Aorist works similarly, except that here the association of the augment with

gnomic use is much stronger (including the Aorist in similes). Crucially, however, there are exceptions, as shown in (29).⁴³

(29) AUGMENTLESS GNOMIC AORIST IN HOMER

ὥστ' ἰχθυῖας, οὓς θ' ἀλιῆες
κοῖλον ἐς αἰγιαλὸν πολιῆς ἔκτοσθε θαλάσσης
δικτύωι ἐξέρυσαν πολυωπῶι (*Od.* 22.386)

'Like fish that fishermen **haul out** from the gray sea with a meshy net onto a hollow beach.'

In addition, West (1989) has identified several augmentless *Imperfects* that seem to have gnomic use, which he views as a remnant of the inherited gnomic value of the injunctive. These occur mainly in Hesiod, though West (1989:33–4) cites one likely example from the *Iliad* as well, shown in (30), where the use of the Ip. φέρον 'carry' parallels that of the Pres. θέλγει 'charms', both describing eternal attributes of items belonging to the immortal god Hermes.⁴⁴

(30) AUGMENTLESS GNOMIC IMPERFECT IN HOMER

αὐτίκ' ἔπειθ' ὑπὸ ποσσὶν ἐδήσατο καλὰ πέδιλα
ἀμβρόσια χρύσεια, τὰ μιν φέρον_[IPF.] ἡμὲν ἐφ' ὑγρὴν ...
εἴλετο δὲ ῥάβδον, τῇ τ' ἀνδρῶν ὄμματα θέλγει_[PRES.] (*Il.* 24.340–3).

'At once he bound beneath his feet his fine sandals—golden, immortal—that **carry**_[IPF.] (carried?) him over the water ... and he took up the wand with which he charms_[PRES.] the eyes of men.'

West's (1989) findings, taken together with the handful of augmentless gnomic Aorists found in the Homeric language, make it difficult to view the augment as endowing the Aorist with its gnomic interpretation. Rather, we have again the augment in an adverbial function, restricting the set of possible readings of the Aorist to a more limited set of readings most likely to be

43. For other augmentless examples from Homer and Hesiod see Platt 1891:217–20. Gnomic Aorists without the augment are also met with in Pindar (6 times), as at Nem. 8.49–50: ἐπαοιδᾶς δ' ἀνὴρ / νώδυνον καὶ τις κάματον **θυῆκεν** 'But with songs a man **may make** even toil painless'.

44. Another possible example is the Ip. ἐξ. . . πέλεν 'protrudes' at *Il.* 5.729. Though the Aor. ἔπλεο, ἔπλετο, ἔπλε is often present referring in the sense 'is/are', it is not so with the Imperfect, which is elsewhere uniformly past referring in the senses 'arose, came about' or 'was/were'. Yet here it seems presential/timeless, being conjoined with Pres. εἶσιν 'is' (line 728) in a generic description of the chariot car of the goddess Hera. Cf. also n.90 below.

intended by the speaker (and interpreted by the addressee). The augment signals that some special, non-stereotypical meaning is intended. In the case of the gnomic interpretation, this special meaning is nearly always flagged as such. Yet gnomic interpretation remains possible without the augment under certain circumstances, just as the presence of the augment does not *require* gnomic interpretation.

TABLE 3.1: Readings of the Aorist with and without the augment in Homer

| POSSIBLE INTERPRETATIONS | | |
|--------------------------|--------------------------|--------------------------|
| | with augment | without augment |
| More likely | stative-resultative | concentrative-sequential |
| | experiential | counter-sequential |
| | gnomic | inceptive (past) |
| | futurate | egressive (past) |
| Less likely | concentrative-sequential | stative-resultative |
| | counter-sequential | experiential |
| | inceptive (past) | gnomic |
| | egressive (past) | futurate |

The function of the augment with respect to the Aorist indicative is represented schematically in Table 3.1. As can be seen, the major interpretations available within the functional range of the Aorist are accessible with or without the augment (columns). However, the presence or absence of the augment makes certain readings more or less likely (rows). The augment makes readings of the Aorist that have present or future time reference salient, while the absence of the augment implicates preterital readings.⁴⁵ The reasons for this distribution are complicated and beyond our current scope (see Hollenbaugh 2020b for more information), though I provide a summary of the argument in comparison with the R̥gvedic data in Section 8.2 below. What matters is that the functional range observed for the Aorist exists independent of the augment and that the subset of readings specified by the augment—and, equally, those specified by its

45. Though most counter-sequential readings are either resultative or experiential, and so in some sense belong to the domain of the perfect (rather than strictly perfective) aspect, they tend to lack the augment in Homer, thus patterning with the narrative uses of the Aorist. The reason seems clear enough: Context, in these cases, renders the anteriority of the Aorist unambiguous. Cf. Platt (1891:220): “the augment is generally dropped after ἐπεὶ.” As the augment’s primary function is to draw out certain readings in the face of potential ambiguity, it is not strictly required in contexts where no such ambiguity is likely to arise. Compare English *When the guests arrived, we ate supper* with *When the guests had arrived, we ate supper*. Given the context (and non-stative verb), no overt signal of anteriority is needed in order for the interpretation to be readily accessible (there are no viable alternatives).

absence—are so specified by implicature only. The augment serves effectively to draw out particular readings in the face of potential ambiguity (e.g., when a speaker wishes to insist that something *has* happened or always happens rather than simply *did* happen at some time in the past). Yet no reading is inaccessible in the absence of the augment. For this reason, the augment cannot be viewed as a marker of tense, a deictic element, or a perfectivizer, and all functions observed for the Aorist (as for the Imperfect) are inherent to its verbal base, not contributed by augmentation.

There is much more that could be said about the augment, its semantics, and its probable origins, but these must be left to be explored elsewhere (cf. Hollenbaugh 2020b). The primary aim of this section has been achieved: I conclude that the augment in Homeric Greek was not a marker of tense or aspect, as has been previously supposed. This being the case, it must be the verbal bases themselves that are responsible for these meanings—the augment serving only to draw out certain among them. Excluding the possibility that the augment is responsible for the temporal and aspectual meanings of the Aorist and Imperfect has been a necessary prerequisite to a study of the function of these verb forms. For we may now proceed with confidence that what we are examining are properties of the verb forms themselves and not of some additional piece of morphology. On this basis, I take the findings of the following chapters to apply to the Homeric Aorist and Imperfect irrespective of the presence or absence of the augment.

CHAPTER 4

Aorist indicative with and without augment

I turn now to the usage of the Aorist and Imperfect indicative in Homer, beginning with the Aorist. I will first enumerate the readings available to the Aorist and their frequencies, then evaluate its functional range in order to determine its denotation.

The readings available to the Aorist are presented in overview in column one of Table 4.1 (bolded for clarity). For ease of comparison I also include the analogous interpretations available to the Imperfect and Perfect/Pluperfect in Homer, with each column representing a functional category and each row representing a particular type of reading (or related set of readings). In curly braces are the predicate types with which a given reading is compatible. So, for instance, the stative reading of the Aorist is available only when the Aorist is built to a state predicate, such as φιλέω ‘love’ (→ Aor. ἐφίλησα ‘I love’ in (31a) below), whereas the resultative reading is available only to transformative situation types (i.e., achievements and accomplishments),⁴⁶ and the experiential reading is available to predicates of any type. Readings marked with “×” (or bolded “**×**”) are unattested in Homeric (including the Homeric Hymns and Hesiod/Pseudo-Hesiod); those in square brackets followed by a question mark are possibly attested but not regular; those with a question mark seem to be attested at this stage but the relevant examples could admit of alternative interpretations. Readings that occur particularly infrequently are marked “rare” (NB this does not necessarily mean irregular). Readings that apply to the Pluperfect but not the Perfect are labeled “(Plpf.).” “CF” stands for *counterfactual*. The rest of the labels will be explained, with examples, in what follows.

TABLE 4.1: Readings of the Homeric Aorist as compared to the Imperfect and Pf./Plpf. ind.

46. On the terms *transformative* and *non-transformative* see Section 2.2 above.

| | AORIST | IMPERFECT | PERFECT/PLUPERFECT |
|-----|---------------------------------------------|--------------------------------------|-------------------------------------|
| 1. | X | progressive-conative {events} | intensive-frequentative {events} |
| 2. | stative {states} | continuous state {states} | stative {non-activities} |
| 3. | resultative/“hot news” {transfm.} | resultative? (rare) {transfm.} | resultative (rare) {transfm.} |
| 4. | experiential {any} | experiential? (rare) {any} | experiential {any} |
| 5. | counter-sequential {events} | counter-sequential {events} | (Plpf.) |
| 6. | present universal? {any} | (present/past) universal {any} | universal {any} |
| 7. | concentrative-sequential {events} | concentrative-sequential {events} | [concentrative]? {events} |
| 8. | [complexive]? {states} | complexive {non-transfm.} | (Plpf.) |
| 9. | inceptive {states} | inceptive {non-achiev.} | (Plpf.) |
| 10. | egressive (rare) {accomp.} | × | × |
| 11. | pluractional {any} | pluractional {any} | × |
| 12. | gnomic {any} | past habitual {any} | generic uses {any} |
| 13. | futurate? {transfm.} | × | × |
| 14. | past CF {any} | past CF {any} | (Plpf.: past CF) |

I begin with discussion of the “perfect-like” interpretations (rows 2–6),⁴⁷ followed by what I call “terminative” readings (rows 7–10). The last four rows (11–14) are treated together as a somewhat miscellaneous group, but they have in common that they all involve multiple-event interpretations and/or some kind of modality. The first two discussions begin with a treatment of the conceptual and theoretical notions of each reading. A similar procedure is followed for the Imperfect in Section 5 below.

4.1 “Perfect-like” readings of the Aorist

In what follows I discuss each reading of the Aorist briefly as it pertains to Homer, with examples of each and a summary of their frequency in my corpus (*Iliad* 1).

2. STATIVE AORIST: This refers to the Aorist used to represent a state as holding at the evaluation time ($t_E \supset t_0$) but does not assert that an event of entering or leaving that state has occurred (unlike the resultative interpretation). This use is attested with some frequency in Homer, though it is vanishingly rare in later Greek outside of Attic drama. Importantly, it may have past or

47. On the term “perfect-like,” cf. n.33 above.

present reference, as shown in (31).⁴⁸

(31) STATIVE USE OF THE AORIST INDICATIVE IN HOMER: PRESENT (a) AND PAST (b) REFERENCE

- a. μή μ' ἔρεθες σχετλίη, μή χωσαμένη σε μεθείω,
τὼς δέ σ' ἀπεχθήρω ὥς νῦν ἔκπαγλ' ἐφίλησα_[AOR.] (Il. 3.414–5).
'Don't provoke me, stubborn woman, lest having been angered I cut you loose, and I come to despise you so terribly as I currently **love**_[AOR.] you.'
- b. οὐδ' ἄρ' ἔτι ἄλλα δυνήσατο_[AOR.] τεύχεα καλὰ
ῥομοῖν ἀφελέσθαι (Il. 5.621–2=13.510–1).
'But he **was** still not **able**_[AOR.] to remove the rest of the splendid armor from his shoulders.'

In (31a) (repeated from (12) above), Aphrodite is addressing Helen, warning her to be careful lest she lose the love that Aphrodite currently has for her. The Aorist must accordingly be read simply as 'I love' and cannot be interpreted otherwise without violence to the text (cf. Chantraine 1953 [2015]:214). A similar situation holds in (31b), where the negated Aor. δυνήσατο is modified by the adverb ἔτι 'still', thus referring to a state ongoing in the past ($t_E \supset t_A$), interpreted as 'was still unable'.

In the first book of the *Iliad* the stative interpretation of the Aorist occurs 4 times (3 secure): 3 with present reference and 1 with past reference, accounting for 2% of all indicative Aorists (231 total, 177 with secure readings).⁴⁹ Of these, 2 with present reference have metrically guaranteed augments; the other 2 (one past and one present referring) are metrically guaranteed to lack the augment.

3. RESULTATIVE AORIST: The resultative reading of the Aorist is quite common in Homer (cf. Schwyzer & Debrunner 1950:281–2 "confective"). In the first book of the *Iliad*, out of a total of 231 indicative Aorists, of which 177 have secure readings (i.e., no likely alternatives), the present

48. Examples of past-referring stative Aorists with the augment are not infrequent, e.g.: ἐφίλησα 'loved' (Il. 9.481, Od. 8.63), οὐδ' ἄρ' ἔτι ἔτλη 'could no longer endure' (Il. 20.421), οὐκ ἐθέλησα 'I didn't want (to fight)' (Od. 13.341). The present-referring stative Aorist is typically augmented, though augmentless examples do occur, e.g.: ἀλλοιοῖός... φάνης νέον ἢ παροιθεν 'you look different now than [you did] before' (Od. 16.181).

49. On the notions of secure interpretations and metrically assured augmentation see Section 1.5 above.

resultative interpretation occurs 25 times (11%), 13 secure (7%). In addition the past resultative interpretation (counter-sequential) occurs 30 times (13%), 24 secure (14%). Combined, there is a total of 55 occurrences (24%), 37 secure (21%). Of these present resultatives, 13 have metrically secure augments (52%), while 6 are metrically guaranteed to lack the augment (24%); 6 are metrically uncertain (24%). On the past-referring resultative use, see below under “counter-sequential.” I provide an example of a present-referring resultative Aorist in (32) (cf. also (28a) above). For a past-referring/counter-sequential resultative example see (34) below.

(32) RESULTATIVE AORIST IN HOMER

νῦν μὲν γὰρ Μενέλαος ἐνίκησεν σὺν Ἀθήνῃ (Il. 3.439).

‘This time Menelaus **has beaten** me with Athena’s help’ (ex. and tr. Wackernagel 1926–8 [2009]:227).

The resultative Aorist usage seems to occur already in Mycenaean, at least when the verb is augmented (cf. Willi 2018:391), as shown in (20) above.

4. EXPERIENTIAL AORIST: The present-referring experiential reading of the Aorist indicative occurs 18 times in the first book of the *Iliad* (8% of all Aorists), along with two cases where it is past referring/counter-sequential (0.9%), for a total of 20 occurrences (9%), 16 secure (9%). Of these, 8 have a metrically assured augment and 8 are metrically guaranteed to lack the augment (40% each); 4 are metrically uncertain (20%). I provide an example of the present-referring experiential Aorist in (33) (cf. also (28b) above).

(33) EXPERIENTIAL AORIST IN HOMER

εἴ ποτέ τοι χαρίεντ’ ἐπὶ νηὸν ἔρεψα (Il. 1.39).

‘If ever I **have roofed over** a temple that pleased you’.

5. COUNTER-SEQUENTIAL AORIST: As mentioned above, the resultative and experiential uses may be transferred into the past in a usage called *counter-sequential* (also called “anterior” or “relative past”).⁵⁰ In principle “counter-sequential” could also include past-referring universal interpretations (type *had been doing such-and-such*), but no such usage of the Aorist occurs

50. For these labels see Givón 2001:293–6, Bybee et al. 1994:62, and E. Dahl 2010:11; for the counter-sequential interpretation as a reading of the perfect aspect see Klein 1994:130–3 and Comrie 1976:53, 55–56, 81

in Homer, to the best of my knowledge (the Imperfect is the preferred form for this use, on which see the §5). Verbs used counter-sequentially typically have the effect of narrating events “out of sequence”—that is, contrary to the standard chronological ordering of events—and are translatable by the English Pluperfect tense (type *had done such-and-such*). An example is (34), which shows both a resultative (τολύπευσε ‘had accomplished’) and an experiential (πάθεν ‘had endured’) interpretation of the Aorist with past reference. In this case, the two different readings arise from the difference between the predicate types of each verb, since ‘accomplishing’ leads to a result state (i.e., some produced object), while ‘enduring’ leads to a consequent state only (i.e., an experience had by the subject).

(34) COUNTER-SEQUENTIAL AORIST IN HOMER: RESULTATIVE AND EXPERIENTIAL

ἦδ' ὅποσα τολύπευσε σὺν αὐτῷ καὶ πάθεν ἄλγεα (*Il.* 24.7).

‘And (Achilles would brood on) all that he **had accomplished** with him [Patroclus] and all the woes he **had endured**’.

The combined figures for the counter-sequential reading of the Aorist in *Iliad* 1, including both resultative and experiential varieties, are as follows: There are 32 total counter-sequential uses of the Aorist (14% of all Aorists), 26 secure (15%). Of these, 4 have the augment metrically assured (13%)—all of which have long-vowel augmentation, rather than syllabic—and 13 assuredly lack the augment (41%). All of the metrically secure examples are resultative; there are 15 cases of metrically uncertain augmentation (47%), including the two experiential examples. Note that, despite having uniformly resultative or experiential interpretation, the counter-sequential Aorists tend to lack the augment. This suggests that the augment does not signal “perfect-like” readings *per se* (pace Willi’s (2018:382–3, 391) “resultative implicatures”) but serves to reduce the likelihood of possible alternative readings in certain contexts, which typically does not include anterior contexts (e.g., in an ἐπεὶ-clause dependent on a past-tense verb), where alternative interpretations are not generally accessible (cf. n.45 above).

6. [UNIVERSAL AORIST?]: The universal use of the Aorist, with present time reference, may be attested a handful of times in Homer, though none occur in *Iliad* 1. A possible but uncertain example is (35a) (cf. also *Il.* 6.126, 23.306–7). Remarkably, Homer may also attest the universal

use of the Aorist even to event predicates, provided the verb has a multiple-event reading, as in (35b).⁵¹

(35) UNIVERSAL AORIST IN HOMER(?): STATE (a) AND ACHIEVEMENT (b) PREDICATES

- a. αἰεὶ τινα φῶτα... ἐδέγμην... ἐλεύσεσθαι (*Od.* 9.513).

‘I **have(?)** always **expected** that a man would come’.

- b. ῥεῖα δ’ ἀρίγνωτος γόνος ἀνέρος ᾧ τε Κρονίων

ὄλβον ἐπικλώσῃ γαμέοντί τε γεινομένῳ τε,

ὥς νῦν Νέστορι δῶκε διαμπερὲς ἥματα πάντα (*Od.* 4.207–9).

‘For easily recognizable is the offspring of a man for whom the son of Cronos spins happiness both at marriage and at birth, as he **has given/been giving** Nestor now continuously all his days’.

Yet it is possible that the adverbials in (35b) refer to the result state rather than to the event itself, as when we say *I went home for the rest of the day* we do not mean that the process of going home lasted all day but that the result state of *being* at home did (cf. n.60 below). If so, the Aorist in (35b) is simply resultative like so many others (cf. similarly *Il.* 1.96). Due to the uncertainty of these examples, I regard the universal use as not securely attested for the Aorist at the Homeric stage (contrast the Present in this use, e.g., at *Il.* 14.269).

COMBINED TOTALS FOR “PERFECT-LIKE” READINGS: In all, there are 79 “perfect-like” readings of the Aorist in *Iliad* 1 (34%), 56 secure (32%). 32 of these are counter-sequential (41%), of which all but 2 occur outside quoted speech, along with one past stative.⁵² Of the combined total (79), 27 have metrically assured augments (34%), 29 securely lack the augment (37%), and 23 are uncertain (29%).

Of course, much of the *Iliad* consists of narrative, a context which practically excludes “perfect-like” interpretations (i.e., there are no such examples known to me) aside from the counter-sequential and past stative uses. By contrast, quoted speech is a more “equal oppor-

51. For another possible example see (61) and n.95 below.

52. I.e., 31 of 33 past-referring “perfect-like” Aorsits in *Iliad* 1 are *not* in quoted speech (39% of the total “perfect-like” Aorists in this book).

tunity” environment for verbal usage, as all kinds of readings and time reference are possible, including sequential narration as well as “perfect-like” interpretations, both counter-sequential and present referring. It is therefore informative to look at verbal usage in quoted speech separate from narrative proper. In *Iliad* 1, we find a total of 75 indicative Aorists in quoted speech, 53 securely interpreted. Of these, there are 48 that show “perfect-like” uses (64%), 31 securely interpreted (58%). Excluding counter-sequential uses, there are 46 that show present-referring “perfect-like” uses (61%),⁵³ 30 securely interpreted (57%).⁵⁴ This latter group is securely augmented in 23 cases (50%), securely augmentless in 15 cases (33%), and metrically uncertain in 8 cases (17%). Note that, while the augment is clearly preferred in “perfect-like” contexts in direct speech, still a considerable percentage (33%) of these Aorists lack the augment. Accordingly, as discussed above, the augment can only be said to favor “perfect-like” interpretation; it does not require, nor is it required by such interpretations.

One may at this point object that, just as proper narrative contexts are biased against the present-referring “perfect-like” uses, so too is quoted speech biased in their favor. In fact, however, narration in quoted speech is by no means uncommon. Nearly a third of the verbs in quoted speech in *Iliad* 1 are part of narrative segments (42 out of 131, 32%), referring to sequences of events in the past, as related by the speaker. Looking only at Aorists, the figures are similar: 21 of 75 Aorists in quoted speech occur in narrative segments (28%). Of these, 3 have “perfect-like” interpretations (14%), 2 of which are counter-sequential (10%).⁵⁵ The remaining 18 (86%) are terminative (15 concentrative, 2 egressive, 1 inceptive), on which see below. Thus, due to its versatility in terms of discourse contexts—principally, narrative and non-narrative—quoted speech seems to me the best environment to look to to get a sense of the relative distribution of the uses of the Aorist in Homeric Greek. While it is of course significant that the Aorist is so often employed in narrative proper, this fact should not be taken (as it often has been) to obscure the fact of its prominent “perfect-like” uses as well.

53. 20% of all 231 Aorists in *Iliad* 1.

54. 17% of all 177 securely interpreted Aorists in *Iliad* 1.

55. The other is present-referring but serves to transition from proper dialogue to a brief segment of narration, and so I consider it to be part of (i.e., the introduction to) that narrative segment. This is ῥῖδῃ . . . ῥῖψε ‘has already thrown’ at *Il.* 1.590–1.

4.2 Terminative readings of the Aorist

7. CONCENTRATIVE-SEQUENTIAL AORIST: This is, of course, an extremely common use of the Aorist in Homer, as at later stages of Greek. The first book of the *Iliad* has 136 examples (59%), 112 secure (63%). Of these, 35 are metrically assured to have the augment (26%), 50 to securely lack the augment (37%), and 51 are metrically uncertain (38%). As expected, the augment is absent from concentrative Aorists more often than not. Setting aside speech tags—which are all concentrative but favor the augment for independent reasons (cf. §3.2 above, item x.)—slightly affects these figures, leaving 124 concentrative Aorists, of which 24 are securely augmented (19%) and 49 securely lack the augment (40%). An example of the concentrative use in sequential narration has been given in (26) above, repeated in (36a). A non-sequential concentrative use can be seen in (36b).⁵⁶

(36) CONCENTRATIVE AORIST IN HOMER: SEQUENTIAL (a) AND NON-SEQUENTIAL (b)

a. ἰστία μὲν **στείλαντο**, θέσαν δ' ἐν νηϊ μελαίνῃ. (*Il.* 1.433).

‘They **drew** the sails, then they **put** them in the black ship’.

b. ἀλλὰ τὰ μὲν πολίων **ἐξεπράθομεν**, τὰ δέδασται (*Il.* 1.125).

‘But what things we **plundered from** the cities, these have been apportioned’.

Mycenaean also shows this use of the augmentless Aorist, as is evident from its occurrence in a temporal clause in (17a) above.

8. [COMPLEXIVE AORIST?]: The complexive use of the Aorist is widely considered an innovation of Greek, being scarce or absent in Homer but far more common later on (Purdie 1898:67–70; Jacobsohn 1933:305–10; Schwyzer & Debrunner 1950:281).⁵⁷ Chantraine’s (1953 [2015]:213–4)

56. On the concentrative reading of the Aorist in Homer see Chantraine 1953 [2015]:213–214, and more generally Schwyzer & Debrunner 1950:280–281; Wackernagel 1926–8 [2009]:224–225, 233–236; Delbrück 1879:102–106.

57. Though Purdie’s (1898:67 ff.) “constative” label resembles in some respects what is here referred to as *complexive*, it should be noted that her term is significantly broader in its scope than mine. By “constative,” she means the bare statement of a fact with no further implication of “perfectivity,” which basically contrasts with the “ingressive” (= inceptive) and “effective” (= punctual concentrative or egressive) uses (p.65). Purdie (1898:67–8) explicitly follows Krüger’s (1873:168) “konzentrierte Erscheinung,” which is said to have a “summarizing” effect and is directly linked to the use of the Aorist in narration. To be clear, I do not consider the “constative” or “statement-of-fact” use of the Aorist to be a legitimate “reading” (abandoning terminology from Hollenbaugh 2018), since it makes no reference to temporal parameters and is thus impossible to evaluate in a non-subjective way. Examples referred

examples of the Aorist in Homer with a “thème duratif” are not complexive in the sense defined here ($t_E = t_A$) but are rather concentrative uses that happen to have a non-punctual runtime of t_E , or else are experiential. However, there are one or two possible candidates for complexive usage of the Aorist in Homer, of which the more questionable is (37) (cf. Gildersleeve & Miller 1900:106).

(37) COMPLEXIVE AORIST IN HOMER?

ἐννῆμαρ ξείνισσε καὶ ἐννέα βοῦς ἱέρευσεν (*Il.* 6.174).

‘For nine days he **entertained/hosted** him and slaughtered nine oxen’.

Here, the meaning is likely pluractional: ‘kept entertaining him (each day) for nine days’ (cf. (67b) below).⁵⁸ All other examples in Homer of ἐννῆμαρ ‘for nine days’ (or ἑξήμαρ ‘for six days’) with a verb in the past indicative show the Imperfect (rarely Perfect). Likewise, the adjective παννύχιος ‘all night long’ occurs in Homer always with the Imperfect or Pluperfect (when a past indicative is used), as at *Il.* 7.476–9, never the Aorist (but cf. (38b) below, from *SH*). This is generally true of all explicit markers of extent of time—the Aorist is dispreferred in favor of the Imperfect—with few genuine exceptions.⁵⁹

to this reading in the grammatical literature are here dispersed mostly among the (non-punctual) concentrative, experiential, and complexive uses of the Aorist (in some cases inceptive), on a case-by-case basis. I have been guided in my categorization of such examples always by the relations that hold between well-defined temporal parameters relative to the context in which the verb occurs on a given occasion.

58. Compare *Il.* 3.232: πολλὰ μιν ξείνισεν ἀρήϊφιλος Μενέλαος ‘Often Menelaus, dear to Ares, entertained him/received him as a guest’. Note that the predicate belongs to the “activity” situation type, which otherwise do not occur in the Aorist with complexive interpretation (at least not until post-Classical Greek). In addition, *Il.* 6.174 has a variant reading with the IpF. ξείνιζε, showing the regular way of designating complexive meaning in Homer, which may well be original, having been later “corrected” by replacing it with the Aorist (so Jacobsohn 1933:307–8). If so, this would support the view of a diachronic change whereby Homeric Greek preferred the Imperfect in complexive contexts, while the later language prefers the Aorist (see further Hollenbaugh 2021b).

59. The formula (τελεσφόρον) εἰς ἐνιαυτὸν is often translated as ‘for a (whole) year’ yet seems better taken in its more literal meaning ‘up to the year bearing fulfillment’, hence ‘until the year (is/was) fulfilled’ or ‘until the end of the year’. For this interpretation cf. ῥηϊδίως κεν ἔπειτα καὶ εἰς ἐνιαυτὸν ἅπαντα / οὐ τι διαπρήξαιμι λέγων ἐμὰ κήδεα θυμοῦ ‘then easily even up to an entire year / I would in no way finish telling my woes of heart’ (*Od.* 14.196–7) and χάσμα μέγ’, οὐδέ κε πάντα τελεσφόρον εἰς ἐνιαυτὸν / οὐδὰς ἴκοιτ’ ‘It is a great gulf, and (a person) would not reach its bottom until a whole year (was) fulfilled’ (*Hes. Th.* 740–1). Cf. also the later modified formula: τετελεσμένον εἰς ἐνιαυτὸν ‘until the year (is) ended’ (*Hes. Th.* 795=WD 561) and τελέσει μέγαν εἰς ἐνιαυτὸν ‘he will come to the end of the long year’ (*Hes. Th.* 799). At *Od.* 4.86 the interpretation ‘for a year’ is impossible: τρεῖς γὰρ τίχτει μῆλα τελεσφόρον εἰς ἐνιαυτὸν ‘for the sheep give birth three times in the course of a full year’ (*for a year). Further, the word τελεσφόρον cannot be simply equivalent to πάντα ‘whole’, since the two co-occur at *Hes. Th.* 740–1 (above) and *Od.* 10.467–8, where there is yet another time expression (ἥματα πάντα ‘every day’) in iterative meaning: ἐνθα μὲν ἥματα πάντα τελεσφόρον εἰς ἐνιαυτὸν / ἥμεθα δαινύμενοι ‘There every day, until the whole year (was) fulfilled

In all of Homeric Greek, only the two examples in (38) look genuinely complexive.⁶⁰ The first, from the *Odyssey*, occurs with a stated definite time interval (τρία ἡμέατα ‘for three days’) and occurs in the same line as a complexive Imperfect to a verb phrase of virtually identical meaning. The second, from the *Shield of Heracles* (SH), occurs with παννύχιος ‘all night’, a word that in Homer invariably signals complexive interpretation when paired with the Imperfect or Pluperfect but never occurs with the Aorist.⁶¹

(38) COMPLEXIVE AORISTS IN THE *ODYSSEY* AND *SHIELD OF HERACLES*

- a. τρεῖς γὰρ δὴ μιν νύκτας ἔχον_[IPF.], τρία δ’ ἡματ’ ἔρυσσεν_[AOR.]

ἐν κλισίῃ (Od. 17.515–6).

‘I held_[IPF.] him for three nights, and kept_[AOR.] him for three days in my hut’.

- b. παννύχιος δ’ ἄρ’ ἔλεκετο σὺν αἰδοίῃ παρακοίτῃ (Ps.-Hes. SH 46)

‘And all night he lay with his venerable wife’.

The best candidate for a complexive Aorist in the *Iliad* known to me is not indicative but an

/ we sat feasting’. Unlike other adverbials expressing extent of time, this formula does not show clear preference for any particular verb form, which varies widely by tense, mood, and finiteness. The Imperfect with (τελεσφόρον) εἰς ἐνιαυτόν is still probably not complexive, found at: Od. 10.467–8, 15.230–1, 455–6; Hes. Th. 635–6.

60. The adverb δὴν ‘for a long time’ occurs with the Aorist a few times in Homer (*Il.* 17.695=*Od.* 4.704, *Od.* 17.72–3, and *Od.* 21.425–6), which might be read as complexive. However, there is reason to believe that these examples do not represent genuinely complexive uses. At *Il.* 17.695=*Od.* 4.704, the adverb refers to the effects of the verb, not the verbal action itself: δὴν δέ μιν ἀμφοσὶ ἐπέων λάβε ‘speechlessness seized him [and thus held him] for a long time’. Compare English *I went home for the rest of the day*, which does not mean that it took the rest of the day to get home but that I remained home for the rest of the day after going there. At *Od.* 17.72–3 the verb τράπετο ‘turned’ is negated, and so δὴν seems to target not the action of turning but the span of his *not* turning away. The verb at *Od.* 21.425–6 is again negated, but here the action *does* seem to be targeted by the adverb: οὐδέ τι τόξον / δὴν ἔκαμον τανύων ‘I did not labor long at all in stringing the bow’. This would seem to be complexive. However, *Il.* 1.512 provides some evidence that verbal predicates with δὴν are not necessarily complexive, since it is a non-specific and subjective unit of time (contrast phrases like παννύχιος ‘all night’, ἔτεα δωδεκα ‘for twelve years’, and the like). When Zeus ἀκέων δὴν ἦστο [IpF.] ‘sat silent for a long time’, he does not actually stop sitting silent after this clause, but continues to do so until Thetis speaks again. This is possible because ‘sit for a long time’ is not really a telic event in the same way that ‘sit for ten minutes’ is, and so the event’s boundedness need not be precisely coextensive with the interval referred to by δὴν. So, in the case of the Aorist at *Od.* 21.425–6, it may be that δὴν simply asserts that the event of laboring in question has a *relatively* long duration but is not absolutely coextensive with any clearly defined interval. A similar observation can be made for indefinite adverbials referring to brief durations (e.g., *Il.* 23.418: μάλλον ἐπεδραμέτην [Aor.] ὀλίγον χρόνον ‘they both ran harder for a little while’).

61. Note that not all adverbials expressing duration entail a complexive interpretation; many are concentrative. Utterances like νύκτα ἀέσαμεν ‘during the night we slept’ are true if “we” did all of our sleeping some time during the night, and so are regarded as concentrative, whereas utterances like εὔδον παννύχιοι ‘they slept all through the night’ are false unless the eventuality (SLEEP) is understood as holding for the entire span of the assertion time (NIGHT) and so are regarded as complexive.

Aorist *participle*, shown in (39).⁶²

(39) COMPLEXIVE AORIST PARTICIPLE IN THE *ILIAD*

Οἶνεὺς γάρ ποτε δῖος ἀμύμονα Βελλεροφόντην
ξείνισ' ἐνὶ μεγάροισιν εἰκόσιν ἥματ' ἐρύξας (*Il.* 6.216–7).

‘Brilliant Oineus once hosted blameless Bellerophontes in his halls, **keeping** [not *having kept] him for twenty days’.

In all, the case for a complexive use of the Aorist at the Homeric stage is not strong, being emergent at best. In two or three instances a complexive interpretation seems warranted, and we may note that in these and most borderline cases the Aorist is built to a state predicate (as ἐρύξας ‘kept’ and ἔλεχτο ‘lay’, but not (37)), anticipating the distribution observed in later Greek (Hollenbaugh 2021b). Thus, while these examples may be viewed as early precursors to later usage, I do not regard complexive as a *regular* use of the Aorist at the Homeric stage, and I exclude the coextension relation $t_E = t_A$ from its denotation (see (52) below). Clearly preferred in the complexive use at this stage, even to state predicates, is the Imperfect, which is regularly found in the scope of adverbials expressing extent of time (see §5 below) in all but the cases just mentioned.⁶³

9. INCEPTIVE AORIST: This use of the Aorist is virtually restricted to state (or “state-like”) predicates (Hollenbaugh 2020c),⁶⁴ whose subject is an experiencer (not an agent).⁶⁵ An example from Homer is (40), repeated from (13) above (cf. also *Il.* 1.595–6, *Od.* 11.55=395).

62. Though most translators take εἰκόσιν ἥματ' ‘for twenty days’ with the Aor. part. ἐρύξας ‘keeping’, it could be taken with the finite verb instead, in which case it would be another example like (37) above, which likewise has the Aor. ind. ξείνισσε ‘hosted’.

63. Past stative uses of the Aorist to state predicates, such as ἐφίλησα ‘loved, used to love’, are by some considered complexive. If placed here, these would add several examples of the complexive use in Homer. However, I class them as stative, since unlike the complexive these examples characterize states as *ongoing* at speech/evaluation time.

64. Some Homeric Aorists to activity predicates may admit of an inceptive interpretation, though none seem securely to require this reading. Such potential cases include: ἐβησαν, perhaps sometimes to be read ‘set out’ (e.g., *Od.* 5.107–108, followed by description of the return journey); ἤλασεν ‘started driving(?), drove’ (*Il.* 23.514); κομίσαντο ‘began tending(?), rescued’ (*Il.* 1.594). Probably unexceptional is ἡγήσατο ‘became leader’ (*Od.* 2.405=3.29=7.37, 5.192), understanding ἡγέομαι as a state predicate ‘be leader’.

65. For discussion and examples in the Greek grammatical literature see Smyth 1956:430; Rijksbaron 2002:20–1; Gildersleeve & Miller 1900:104–5; Kühner–Gerth:155–7; Goodwin 1889:24. On the inceptive interpretation of perfective aspect cross-linguistically see (e.g.) Comrie 1976:19–20 and Binnick 1991:154.

(40) INCEPTIVE AORIST IN HOMER: STATE PREDICATE

ὦς ἔφατ', ἔδδεισεν δὲ βοῶπις πότνια Ἥρη (*Il.* 1.568).

‘Thus he spoke, and ox-eyed queen Hera **was seized with fear**’.

Wackernagel (1926–8 [2009]:224) and Jacobsohn (1933:308–9) suggest that the Greek Aorist inceptive may be an innovation, as it is relatively rare in Homer (in competition with the inceptive Imperfect) and virtually lacking in Vedic Sanskrit (but cf. E. Dahl 2010:293–6, following Delbrück 1897:239–40 and Hoffmann 1967:157–158).

Book 1 of the *Iliad* provides 13 examples of inceptive Aorists (6%), 7 secure (4%). Of these, only 1 has a metrically assured augment (8%), while 7 are assured to lack it (54%), and 5 are uncertain (38%). All 13 examples are built to state predicates (contrast the inceptive Imperfect discussed in §5.3 below).

The inceptive use of the Aorist may be attested already in Mycenaean, if (19a) above is correctly interpreted.

10. EGRESSIVE AORIST: Though more common in later Greek (cf. Gildersleeve & Miller 1900:94 “Aorist of attainment”; e.g., Plat. *Ion* 530a), there may be a few examples of the egressive use of the Aorist already in Homer. In (41), the Aor. κάππεσον (to the lemma καταπίπτω ‘fall down’) refers only to the final, culminating stage of the verb, which I translate ‘dropped down’ (i.e., ‘*finished* falling, landed’), since the beginning and middle stages of Hephaestus’ fall are referred to in the preceding lines (Aor. ῥίψε ‘he threw’, Ip. φερόμην ‘I was borne, fell’).

(41) EGRESSIVE AORIST IN HOMER(?)

ῥίψε ποδὸς τεταγὼν ἀπὸ βηλοῦ θεσπεσίοιο·
πάν δ' ἥμαρ φερόμην, ἅμα δ' ἡελίῳ καταδύντι
κάππεσον ἐν Λήμνῳ (*Il.* 1.591–3).

‘Having grabbed hold of my foot he threw (me) from the threshold of heaven; I was borne down all day long, and as the sun set I **dropped down** in Lemnos’.

Iliad 1 has 2 such examples (0.9%), of which the one just cited seems secure (0.6%). The example in (41) is securely augmentless (50%), while the other example is metrically uncertain (50%). The second example in *Iliad* 1 is negated οὐδ' ἔτ' ἔδησαν and might be interpreted ‘they

did not end up binding (him) after all’ (*Il.* 1.406), to the verb δέω ‘bind’ (unless conative ‘no longer sought to bind’, or expressing inability ‘could no longer bind’).

Cf. similarly the Aor. ἔφυγεν ‘escaped’ (focusing on the culmination of the action FLEE) beside Ipfc. ἔφευγεν ‘fled, took flight’ (referring to the beginning of the action or to the action in its entirety), for which see (76) below. The use may, perhaps, also occur in anterior contexts (counter-sequential), as ὤπτησαν ‘had roasted, finished(?) roasting’ at *Od.* 3.470. As in later Greek, all putative Homeric examples of the egressive Aorist are built to accomplishment predicates. This makes logical sense, as these are the only type of events that have a clear endpoint distinct from their initial and medial phases, so the egressive reading is practically restricted to accomplishment predicates.

COMBINED TOTALS FOR TERMINATIVE READINGS: Taken together, the terminative uses of the Aorist in *Iliad* 1 total 151 (65%), 120 with secure readings (68%). Of these, 36 have metrically secure augments (24%), while 58 are securely augmentless (38%); 57 are metrically uncertain (38%). As expected, the augment is absent from terminative Aorists more often than not.

As mentioned above, the terminative readings of the Aorist cluster, naturally, in narrative proper and in narrative segments of quoted speech. 125 of the 151 terminative Aorists in *Iliad* 1 (83%) occur in narrative proper (i.e., not in quoted speech), of which 99 are securely interpreted (83%). A further 18 (12%) are in narrative segments within quoted speech (i.e., “speech-narration”), of which 17 are securely interpreted (14%). The remaining 8 terminative Aorists (5%)—4 of which are securely interpreted (3%)—occur in quoted speech without being situated within a larger narrative segment, of the type seen in (36b) above. Typically these are expository references to a past event, causally linked to the present, but where they are concentrative they are not sequential. In all, it may be seen that 26 of the 151 terminative Aorists in *Iliad* 1 occur in quoted speech (17%), 21 being securely interpreted (out of 120 total: 18%). Thus, while the terminative uses of the Aorist are disfavored in quoted speech, especially outside narrative segments, they remain possible even in these environments. By contrast, recall that the present-referring “perfect-like” uses of the Aorist are possible *only* in quoted speech. For this reason, though the Aorist is rightly said to be a tense of narration already in Homer, the most informa-

tive environment for determining its functional range is quoted speech (see §4.4 below).

4.3 Pluractional and modal readings of the Aorist

11. PLURACTIONAL AORIST: The Aorist, with or without the “iterative” suffix -σκ-, can refer to a pluractional eventuality obtaining in the past. These come in two main varieties: iterative and distributive. The former involves the sequential repetition of the same action, while the latter involves an action that is dispersed among multiple participants. The pluractional uses are unrestricted by predicate type, occurring with events as well as stage-level states (cf. (43) below and *Il.* 11.566–7).⁶⁶ The use of the modal particle ἄν/κέν with the Aorist to mark iterativity is post-Homeric (Smyth 1956:403, 432). In Homer, the Aorist indicative can express iterativity all on its own (Jacobsohn 1933:306–7; Chantraine 1953 [2015]:214), as shown in (42a). The negative is also attested (e.g., *Od.* 16.367). Though the distributive use is typically said to belong properly to the Imperfect (Gildersleeve & Miller 1900:92), it is not in fact unavailable to the Aorist, which has a distributive function with some frequency in Homer (Hollenbaugh 2018:29; Crespo 2014:76–8), as shown in (42b). Compare the reciprocal distributive Aor. ἀλλήλησι κέλευσαν (e.g., *Od.* 6.211) and Ipfr. ἀλλήλοισι κέλευον (e.g., *Il.* 2.151), both ‘they (each) gave commands to one another’. Semantically, the perfective aspect is in no way incompatible with the iteration of an eventuality or with a plurality of participants (E. Dahl 2010:71–3, 78–80; Comrie 1976:27).

(42) ITERATIVE-PLURACTIONAL (a) AND DISTRIBUTIVE-PLURACTIONAL (b) AORIST IN HOMER

a. ὥς αἰεὶ Ἀχιλῆα **κίχῃσατο** κύμα ῥόοιο (*Il.* 21.263).

‘Thus the flood of the river continually **kept overtaking** Achilles’.

b. ἄσβεστος δ’ ἄρ’ ἐνὶ ὄρτο γέλως μακάρεσσι θεοῖσιν (*Il.* 1.599).

‘And unquenchable laughter **broke out among** the blessed gods’.

The pluractional interpretations are always special cases of some other reading, such as experiential (*Il.* 19.85–6) or concentrative-sequential (as in (42) above).

66. Despite Bianconi (2019:176), who makes no distinction between stage-level and individual-level states (cf. §2.2 above).

The suffix -σκ- is frequently added to an Aorist stem in Homer and Hesiod to overtly mark pluractionality (Chantraine 1948 [2013]:311–3), which may again be iterative or distributive, as in (43). (43a) is iterative-pluractional, while (43b) is distributive-pluractional.

(43) AORIST IN -σκ-: ITERATIVE-PLURACTIONAL (a) AND DISTRIBUTIVE-PLURACTIONAL (b)

a. ἀλλ' ὅτε δὴ πολύμητις ἀναΐξειεν Ὀδυσσεύς,

στάσκειν_[AOR.], ὑπαὶ δὲ ἴδεσκε_[AOR.] κατὰ χθονὸς ὄμματα πήξας,

σκηπτρον δ' οὔτ' ὀπίσω οὔτε προπρηνὲς ἐνώμα_[IPF.],

ἀλλ' ἀστεμφὲς ἔχεσκεν_[IPF.], αἶδρει φωτὶ ἐοικώς (*Il.* 3.216–9).

'But whenever Odysseus of many wiles arose, he **would stand**_[AOR.] and **look down**_[AOR.] having fixed his eyes down on the ground, and he would move_[IPF.] his staff neither backwards nor forwards, but would hold_[IPF.] it still, like an ignorant man'.

b. πολλοὶ δ' ἀροτῆρες ἐν αὐτῇι

ζεύγεα δινεύοντες ἐλάστρεον_[IPF.] ἐνθα καὶ ἐνθα.

οἱ δ' ὁπότε στρέψαντες ἰκοίατο τέλσον ἀρούρης,

τοῖσι δ' ἔπειτ' ἐν χερσὶ δέπας μελιηδέος οἴνου

δόσκειν_[AOR.] ἀνὴρ ἐπιών· τοὶ δὲ στρέψασκον_[AOR.] ἄν' ὄγμους (*Il.* 18.542–6).

'And many ploughmen upon it (the field), wheeling their yokes, were driving_[IPF.] them this way and that. And whenever, having turned, they would come to the headland of the field, then a man coming up to (each of them) **would give**_[AOR.] into their hands a cup of honey-sweet wine; and the (ploughmen) **would turn**_[AOR.] over the furrows'.

The examples so far have been pluractional and terminative, in the sense that the repeated action is isolated to some definite interval in the past. Yet the Aorist in -σκ- is not restricted to terminative-pluractional use alone but may be habitual as well, as shown in (44) (cf. *ibid.*:311–2). Habituality refers to a situation that holds at regular (or semi-regular) intervals over an indefinite span of time.

(44) HABITUAL AORIST IN -σκ- IN HOMER

οὐ μὲν γάρ τι φύγεσκε βαθείης βένθεσιν ὕλης

κνώδαλον, ὅττι δίοιτο· καὶ ἔχνεσι γὰρ περιήιδει (*Od.* 17.316–7).

‘No creature (**ever**) **escaped/could escape** him in the depths of the deep wood, whatever he chased; for he was exceedingly knowledgeable in their tracks as well’.

The fact that the Aorist has habitual readings only when suffixed with $-\sigma\chi-$ has (among other considerations) led Bianconi (2019:172–82) to analyze the $-\sigma\chi-$ suffix as a marker of imperfectivity rather than pluractionality. This is almost certainly true of the Anatolian $-\check{s}k-$ suffix (cf. Hoffner & Melchert 2008:317–22) from which, as Bianconi (2019:172–82) argues, the Homeric suffix has its source (having “replicated” the function without borrowing the morpheme itself, which already existed in Greek). The Hittite suffix can have progressive, habitual, pluractional, inceptive, and even complexive uses (cf. Hoffner & Melchert 2008:318–9).⁶⁷ However, the $-\sigma\chi-$ suffix in Homer is not so versatile. It is mostly pluractional and/or habitual and only rarely has continuous-state readings (cf. (71b) below).⁶⁸ It is never (to my knowledge) progressive without being pluractional. This fact may pose a serious problem for Bianconi’s (2019:172–82) claim that the suffix $-\sigma\chi-$ is a marker of generalized imperfective aspect, rather than being strictly pluractional, since imperfective markers are characteristically compatible with the plain progressive interpretation, while pluractional markers may or may not have this function.⁶⁹ Note that in Hittite the $-\check{s}k-$ suffixed Preterite *does* have simple progressive interpretations, as in *nu* KUR ^{URU}*Hatti akkiškittari* ‘And the land of Hatti is dying’ (KUB 14.14+ rev. 14, New Hittite). Nonetheless, I tentatively follow Bianconi (2019:172–82) in assuming that the $-\sigma\chi-$ suffix builds derived imperfectives to Imperfects and Aorists in Homeric Greek (of Type 2: $t_E \supseteq t_A$; cf. n.67 and §2.5 above).

In *Iliad* 1, there are 10 Aorists with pluractional interpretations (none in $-\sigma\chi-$) (4%). Of these, 3 are iterative (1 terminative, 2 experiential), 6 are distributive (4 terminative, 1 experiential,

67. Recall that the complexive, inceptive, and pluractional terminative readings are compatible with imperfective aspect of the kind denoted by what I have called the Type 2 imperfective gram type (cf. §2.5 above), which requires only inclusion—not proper inclusion—of assertion time in eventuality time ($t_E \supseteq t_A$), thus allowing for the coextension of these intervals. An example of the complexive use is in Hittite is: *nu* ^{URU}[*Šanaḫhuit*]tan *INA* ITU.5.KAM *zahḫeškenun* ‘and I **fought against** Šanaḫuitta for five months’ (KBo 10.2 i 47 (Old Hittite/New Script)).

68. It may also be inceptive in its habitual sense, as perhaps at *Od.* 11.599.

69. Inglese & Mattioli (2020:272) list habitual and “continuative” (\approx progressive/continuous-state) as “additional functions” of pluractional markers cross-linguistically.

and 1 resultative), and 1 is habitual (gnomic). 3 have metrically assured augments, 4 lack the augment, and 3 are uncertain.

12. GNOMIC AORIST: On the gnomic Aorist in Homeric Greek see Platt 1891:217–21 and Chantraine 1948 [2013]:468. For an excellent general discussion with further references see Wackernagel 1926–8 [2009]:229–33.⁷⁰ Following Platt’s (1891) usage, I will use the term *gnomic* to refer to the use of the Aorist not only in gnomes proper but also in similes (extremely frequent in epic), making the distinction only where relevant. As Platt (1891:217–21) has shown, the gnomic Aorist is nearly always augmented, with only a handful of genuine exceptions in Homer/Hesiod and six in Pindar (cf. above §3.2). The gnomic Aorist is rare under negation (see item ix. in §3.2 above), though there is at least one Homeric example (οὐκ ἔλαθε ‘does not escape the notice of’ (*Il.* 17.676)).

Occurrences of the gnomic Aorist are frequent at all stages of Ancient Greek, and Homer is no exception. However, in *Iliad* 1 only a single example happens to occur, which is a genuine gnome rather than a simile, given in (45).

(45) GNOMIC AORIST IN *ILLIAD* 1

ὅς κε θεοῖς ἐπιπείθεται, μάλα τ’ ἔκλυον αὐτοῦ (*Il.* 1.218).

‘Whoever obeys the gods, they **listen** to him carefully’.

In terms of situation type, the gnomic Aorist is unrestricted. Wackernagel (1926–8 [2009]:232) says that “the aorist in gnomic utterances always refers to a completed action.” However, as he also points out, this includes state predicates in inceptive meaning.

As with the pluractional use, the gnomic use of the Aorist is not mutually exclusive with other readings of the Aorist. On the contrary, according to Wackernagel (1926–8 [2009]:232) the aspectual value of the Aorist is always maintained in gnomic use, being used contrastively beside the gnomic Present (or Perfect) indicative. As he puts it: “[I]f we go through the examples in similes in particular, where aorist and present alternate, or if we compare gnomic utterances in the aorist with those in the present, we see that the aorist is always used when the

70. For the possibility of a gnomic-like use of the Aorist indicative in Vedic Sanskrit, cf. Delbrück 1897:285–6 and Schwyzler & Debrunner 1950:283. In gnomic/characterizing sentences Vedic typically uses the augmentless Aorist (i.e., the injunctive), which in Homer has merged functionally with the indicative.

meaning is ‘effective’ [= concentrative] or ingressive [= inceptive], while a state is rendered in the present (or perfect).” This aspectual contrast can be seen (interpreting his use of the word “state” very loosely) in (46a), repeated from (23) above, where ἐχάρη has an inceptive interpretation ‘is seized with joy, rejoices’ to the state predicate χαίρω ‘be joyful’, whereas the Present κατασθίει ‘devours’ is an activity predicate that is ongoing at the same time as the subjunctive σεύωνται ‘(although) they are rushing’. Similarly, the gnomic Aorist in (46b), in a relative clause marked by “generalizing” τε, could equally well be rendered ‘gives’ or ‘has given’, showing that the Aorist, even in gnomic use, is not deprived of its perfect(ive) meaning.

(46) GNOMIC AORIST AND PRESENT/PERFECT IN HOMER: ASPECTUAL CONTRAST

- a. ὥς τε λέων ἐχάρη_[AOR.] μεγάλῳ ἐπὶ σώματι κύρσας. . .

πεινῶν· μάλα γάρ τε κατασθίει_[PRES.], εἴ περ ἂν αὐτόν

σεύωνται_[SV.] ταχέες τε κύνες θαλεροὶ τ’ αἰζηοί (Il. 3.23–6).

‘As a lion **is seized with joy**_[AOR.] when he comes on a large carcass. . . when he is hungry; he devours_[PRES.] it eagerly, although against him are rushing_[SV.] swift hounds and strong young men’ (ex. and tr. Wackernagel 1926–8 [2009]:232).

- b. μήτε σύ, Πηλείδῃ, ἐθέλ’ ἐριζέμεναι βασιλῆϊ

ἀντιβίην, ἐπεὶ οὐ ποθ’ ὁμοίης ἔμμορε_[PF.] τιμῆς

σκηπτουχος βασιλεύς, ᾧ τε Ζεὺς κῶδος ἔδωκεν_[AOR.] (Il. 1.277–9).

‘Son of Peleus, don’t seek to contend against the king, since the sceptered king never shares_[PF.] in common honor, to whom Zeus **gives/has given**_[AOR.] glory’.

Whatever its ultimate explanation may be, note that the explanation given by Smyth (1956:431) and others that the Aorist “simply states a past occurrence and leaves the reader to draw the inference from a concrete case that what has occurred once is typical of what often occurs” cannot be correct, as Wackernagel (1926–8 [2009]:230–1) is careful to observe. He points out that the parallels adduced from German and English—such as *Faint heart never won fair lady*—invariably involve either negation or quantification over events with words like *always* (or both). Such uses of the Aorist exist in Greek, but are better regarded as instances of what Smyth (1956:431) calls the “empiric” use of the Aorist (which I regard as a special case of the experiential). Moreover, Wackernagel (1926–8 [2009]:231) adds, this view of the gnomic Aorist

“does not work at all for the similes.”

Wackernagel (1926–8 [2009]:231–2) also discusses how the Greek usage differs from uses of the Preterite found in German or English, of the type *Curiosity killed the cat*, pointing to some singular past event as a basis for generalization to all time. According to Wackernagel, such an explanation, though advocated for by Delbrück (1897:286–306) and others, can at best account for the use of the Aorist in similes, but cannot be applied to genuine aphorisms of the type παθὼν δὲ τε νήπιος ἔγνων ‘The fool learns by experience’ (Hes. *WD* 218). Note that the phrase *Curiosity killed the cat*, like *Rome wasn’t built in a day*, does rely on an inference to be drawn on the basis of a (real or imagined) past event, whereas the Greek gnomic Aorist does not. Accordingly, παθὼν δὲ τε νήπιος ἔγνων ‘The fool learns by experience’ is a general statement about fools, whereas *Curiosity killed the cat* is not a general statement about cats.⁷¹

13. FUTURATE AORIST: The label “futate,” coined by Prince (1973), standardly refers to a verb form not overtly marked for future tense that has future reference in certain contexts, of the type *My plane leaves/is leaving tomorrow at noon*. In the scope of this dissertation, the futurate use applies only to the Aorist (Smyth 1956:432, Gildersleeve & Miller 1900:114) and, occasionally, to the Perfect (Smyth 1956:435, Schwyzler & Debrunner 1950:286–7). Of course, the Present indicative can be used to refer to future time (Smyth 1956:421–2), though it is not considered here. The use appears to be restricted to transformative events (i.e., achievements and accomplishments), strongly favoring one lexical item in particular: ὄλλυμαι ‘be lost, perish’, whose Aorist forms are attested with future reference both in Homer (see (25a) below) and in Classical Greek (see citations in Gildersleeve & Miller 1900:114). Other lexical items are met with, however.

For linguistic treatments of futurate constructions cross-linguistically, see De Wit 2017; Copley 2009; Iatridou 2000:240; Huddleston 1977; Dowty 1977; Goodman 1973; Prince 1973. De Wit (2017:190 and passim) considers, in particular, the interaction of perfective aspect and present tense to yield futurate interpretations in Slavic languages and others. Past tense grams seem not to have future time reference unless they are embedded under a modal, of the type *If I had a million dollars* or *I think it’s time we went to bed* (cf. Iatridou 2000). In English, only the fixed

71. Thanks to Anahita Hoose for helpful discussion about these examples.

phrase *You got it!* (in the affirmative meaning ‘Sure!’) shows an unembedded past tense with future reference, though this seems ultimately to be from the presential (stative) Perfect *have got* (cf. Kiparsky 2002:113) and so is not properly a past tense in any case. Perfective grams, on the other hand, are cross-linguistically common in contexts of future time reference, as De Wit (2017:190) shows.⁷²

Crucially, the futurate use of the Greek Aorist occurs in *main* clauses, not just dependent clauses. In future-referring conditional sentences in (e.g.) English, it is of course regular to use the Present indicative in the dependent clause (protasis) but not the main clause (apodosis), as in *If you get there on time, you will be lucky* but not **If you will/are going to get there on time, you are/were/have been lucky*. The same is true of the Preterite, as in *If you got there on time, you would be lucky* but not **If you are/were going to get there on time, you were/had been lucky*. In Greek, however, a verb form that is not marked for future time reference may sometimes occur in the apodosis of a conditional (or temporal) sentence when the protasis contains a Future indicative or a subjunctive, as in (47a) below, or when coordinated with a Future indicative in an apodosis, as in (47b) below. I assume that the context established by the Future indicative or subjunctive in a dependent or coordinated clause is what licenses the use of the Aorist in future reference in a main clause. Still, it must be recognized that the meaning of the Aorist has to at least be marginally compatible with future-shifted interpretations of this kind, since (unlike the Present/Preterite in English conditionals) the Aorist need not be syntactically embedded under a modal in order to have a futurate interpretation.⁷³

Two examples of future-referring Aorists in Homer (cf. Chantraine 1953 [2015]:214–5) occur in apodoses of conditional sentences containing a Future indicative (Fut.ind.) or a subjunctive (sjv.), both of which regularly have future time reference. These are presented in (25) above and repeated in (47). Note that the Aorist in the apodosis of (47b) is futurate even though the protasis contains an Aorist indicative and is not future referring. In this case, it seems to be the Future

72. For example, in Tunisian Arabic, the Perfective is often used to refer to an event located in the future, as in *hāni jīt*_[PFV.] ‘Here **I come**’, most often used in contexts signifying ‘I’ll be right there’ or ‘I’ll be right back’. Similarly, the set phrase *mšēt*_[PFV.] *m^cāk* ‘It **went** with you’ idiomatically has a meaning close to English ‘You(’ve) got it!’ / ‘You bet!’ or ‘Sure!’ (i.e., said of something the speaker is agreeing to do in the immediate future).

73. The augmented Aorist may have a similar function in Vedic, on which see n.152 in §9.3 below.

indicative in the coordinated apodosis that licenses the futurate interpretation of the Aor. ind. ἀπέτεισαν ‘will repay’.

(47) FUTURATE AORIST INDICATIVE IN HOMER

- a. εἰ μὲν κ' αὖθι μένων Τρώων πόλιν ἀμφιμάχωμαι_[PRES.SJV.],
ὤλετο_[AOR.IND.] μὲν μοι νόστος, ἀτὰρ κλέος ἄφθιτον ἔσται_[FUT.IND.] (*Il.* 9.412–3 ≈ 414–6).
‘If, staying here, I fight around_[PRES.SJV.] the city of the Trojans,
then my return home **is done for**_[AOR.IND.] but immortal fame will be_[FUT.IND.] mine’.
- b. εἴ περ γάρ τε καὶ αὐτίκ' Ὀλύμπιος οὐκ ἐτέλεσσε_[AOR.IND.],
ἔκ τε καὶ ὁψὲ τελεῖ_[FUT.IND.], σύν τε μεγάλῳ ἀπέτεισαν_[AOR.IND.] (*Il.* 4.160–1).
‘For even if indeed the Olympian has not accomplished_[AOR.IND.] it straightaway,
he will accomplish_[FUT.IND.] it completely even late on, and then they **will pay**_[AOR.IND.]
together with a heavy price’ (ex. and tr. Wackernagel 1926–8 [2009]:228).

Wackernagel (1926–8 [2009]:228–9) is careful to distinguish the basic type of futurate Aorist represented by (47) above from the Aorist in “future *perfect*” function, which he says is found only in post-Homeric Greek (perhaps incorrectly, cf. (49) below). An example from Classical Greek is given in (48), where “for κατεργάσαντο,” Wackernagel (1926–8 [2009]:228) says, “a Latin speaker would have used the future perfect, *perfecerint*” ‘will have accomplished’.

(48) FUTURATE (≈ “FUTURE PERFECT”) USE OF THE AORIST IN CLASSICAL GREEK

- ἦν καταστρέψῃται_[AOR.SJV.]... σὸν τὸ ἔργον, ὃ δέσποτα, γίνεται_[PRES.IND.]· οἱ γὰρ σοὶ δοῦλοι
κατεργάσαντο_[AOR.IND.] (Hdt. 8.102.2).
‘If he [Mardonius] subdues_[AOR.SJV.] (all that he says he will), then the achievement
will be ascribed_[PRES.IND.] to you, Sire; for your slaves **will have accomplished**_[AOR.IND.]
it [i.e., it will be your slaves who have wrought it]’ (ex. and tr. Wackernagel 1926–8
[2009]:228).

In *Iliad* 1, there are only two reasonably clear examples of the futurate Aorist (viz. *Il.* 1.298–9 and 243–4), given in (49), both of which seem to fall into the latter type of futurate Aorist, used where English or Latin would use the Future Perfect. These examples are not as strong as those

given above, however, since they occur in dependent rather than main clauses, subordinate to a verb in the Future indicative.⁷⁴ The first has a metrically assured augment, the second securely lacks the augment (the only such case in Homer known to me).

(49) FUTURATE AORIST IN *ILLIAD* 1 (“FOR FUTURE PERFECT”)

- a. σὺ δ’ ἔνδοθι θυμὸν ἄμύξεις_[FUT.IND.]
 χωόμενος, ὃ τ’ ἄριστον Ἀχαιῶν οὐδὲν ἔτισας_[AOR.IND.] (*Il.* 1.243–4).
 ‘And you will rend_[FUT.IND.] your spirit within, furious that you **(will?) have** in no way **shown respect to**_[AOR.IND.] the best of the Achaeans’.⁷⁵
- b. χερσὶ μὲν οὐ τοι ἐγὼ γε μάχσομαι_[FUT.IND.] εἵνεκα κόουρης,
 οὔτε σοὶ οὔτε τῷ ἄλλῳ, ἐπεὶ μ’ ἀφέλεσθῆ_[AOR.IND.] γε δόντες (*Il.* 1.298–9).
 ‘I will not fight_[FUT.IND.] for the girl with my hands, neither against you nor any other, since you **will have taken** (her) **back**_[AOR.IND.] from me who gave her (in the first place)’ [i.e., the ones who gave her will be the ones to have taken her back].

The futurate uses of the Aorist can be accounted for in terms of “future shifting.” That is, the eventuality can be interpreted as located in the future in a context where the evaluation time itself is located in the future relative to speech time ($t_s < t_0$), called “future shifted.” In such cases, the eventuality time (t_E) may at least partially precede the (future-shifted) evaluation time ($t_E \leq t_0$) even while it happens to follow the moment of speech ($t_s < t_E$). In order to have future shifting, however, the context needs to supply a salient evaluation time located in the future relative to speech time. For this reason, all examples of futurate Aorists in Homer occur in conjunction with verbs in the Future tense or subjunctive mood, which serve to establish a future-shifted evaluation time (t_0) in the discourse, as can be seen in (47) and (49) above.

13. COUNTERFACTUAL AORIST: For a semantic analysis of counterfactuality and its interaction

74. Cf. similarly the Aorist *infinitive* with future reference in the “Brothers” poem of Sappho (6–9): λίσσεσθαι... ἐξίκεσθαι... καὶ μὲν ἐπεύρην ‘to pray that he will return and find us’.

75. Whether Agamemnon will *actually* fail to honor Achilles is at this point technically still in question, as he has not yet taken Briseis (contrast the later preterital use of this verb at *Il.* 1.412). Thus, Achilles warns that if Agamemnon *does* fail to honor him, as seems nearly certain, then the consequence will be his own regret (‘you will rend your spirit’). The Aorist is used of future action anterior to the action expressed by the Future indicative, thus amounting to the counter-sequential use projected into the future. Of course, the English translation of ἔτισας is best without *will*.

with past tense and perfective aspect, particularly with respect to Modern Greek, see Iatridou 2000. The Aorist with ἄν/χέν expresses past counterfactuality in Homer (Chantraine 1953 [2015]:324–5), as at all stages of Greek. An example is (50) (cf. similarly *Il.* 2.155–6; without negation at *Il.* 16.617–8; with optative apodosis at *Il.* 5.311–2).

(50) AORIST PAST COUNTERFACTUAL IN HOMER

καί νύ κεν ἔνθ' ὁ γέρων ἄπο θυμὸν ὄλεσεν,
εἰ μὴ ἄρ' ὅξ' ἔ νόησε βοὴν ἀγαθὸς Διομήδης (*Il.* 8.90–1).

‘And now here the old man **would have lost** his life, if Diomedes, good at the war-cry, **had not noticed** in time’.

No examples of the counterfactual use of the Aorist happen to occur in *Iliad* 1.

4.4 Functional range of the Homeric Aorist

Based on the readings available to the Aorist in Homer described above, we may get a sense of its functional range. It must be compatible with readings typical of perfect aspect, including the stative use, while also being compatible with all terminative uses *except* the complexive use. In addition, we have seen that the Homeric Aorist has an affinity for readings most typical of stative-resultative or perfect grams, which can be clearly observed in quoted speech, as summarized in Table 4.2.

TABLE 4.2: Distribution of the Aorist in quoted speech and narrative in *Iliad* 1

| | | terminative (151) ^a | “perfect-like” (79) ^a | |
|------------------------|-----------------------|-----------------------------------|----------------------------------|------------------------|
| | | | present-referring (46) | past-referring (33) |
| narrative proper (156) | | 125 (80%) | 0 | 31 (20%) |
| quoted speech (75) | speech-narration (21) | 18 (24%) | 1 (1%) | 2 (3%) |
| | non-narrative (54) | 8 (11%) | 45 (60%) | 0 |

^a It will be noticed that 151 and 79 do not make 231. This is because the gnomic Aorist at *Il.* 1.218 is counted neither as terminative nor as “perfect-like.” This is also why the non-narrative uses add up to 54, which is one greater than 8 plus 45.

Percentages given are out of the total for each row, or combined total for split rows. Thus, 125 terminative Aorists represent 80% of the 156 Aorists occurring in narrative proper, while 18 terminative Aorists make up 24% of the 75 Aorists occurring in quoted speech. In this way, it can be readily observed how much of each discourse environment—narrative proper vs. quoted speech—is taken up by the terminative and “perfect-like” uses of the Aorist. In quoted speech, where all uses of the Aorist are possible, we see a strong preference for “perfect-like” usage ($p < 0.00001$, Fisher’s exact test). In narrative proper, where only preterital uses are possible, the terminative value of the Aorist is predominant. Yet even here it shows past-referring “perfect-like” functions (counter-sequential and past stative) 20% of the time.

The strong tendency of the Aorist to have “perfect-like” interpretations in Homer must be taken into account when assigning it a denotation at this stage of the language. On the one hand, there is nothing about perfective aspect that excludes resultative, experiential, or even stative interpretations (cf. Condoravdi & Deo 2014). Indeed, languages that lack perfect grams will regularly employ a perfective gram or simple past tense gram in “perfect-like” contexts (Comrie 1976:58). And, though Greek has a functional category called the Perfect, it does not express the full range of perfect aspect at the Homeric stage but is typically used in its stative function of the type $\tau\acute{\epsilon}\theta\nu\eta\chi\epsilon$ ‘is dead’ (Gerö & von Stechow 2003). One could suppose that, because the Perfect in Homer was rarely used in resultative function (cf. Table 4.1 above and see Hollenbaugh 2021b for details), the Aorist—expressing perfective aspect—is used to express this meaning, being the only other functional category that could reasonably do so. A similar account may be made for the use of the Aorist in its counter-sequential function, as the Pluperfect in Homer is seldom used in such contexts (see again Hollenbaugh 2021b for details). Yet no such account will explain the Aorist’s experiential and possible universal uses, nor is it clear under this account why the Aorist should continue having resultative and counter-sequential values even in post-Homeric Greek⁷⁶ when the Perfect is more fully grammaticalized as a perfect gram (Gerö & von Stechow 2003). Further, in Vedic, where the Perfect is manifestly *not* a

76. On the post-Homeric resultative use of the Aorist see Schwyzler & Debrunner 1950:281–2 (“konfektive”); Wackernagel 1926–8 [2009]:227; Gildersleeve & Miller 1900:107–8; Delbrück 1879:107–8; 1897:280–1. On its counter-sequential use see Smyth 1956:433–4; Rijksbaron 2002:20; Gildersleeve & Miller 1900:109; Delbrück 1879:106–7. On the diachrony of the Aorist in these respects see Hollenbaugh 2021b.

stative-resultative gram but expresses perfect aspect at least as part of its functional domain (E. Dahl 2010:423, but cf. Jamison 2014:155, 158–60), the Aorist almost always has perfect interpretations (Hollenbaugh 2018). So, attempting to explain the observed “perfect-like” behavior of the Aorist by recourse to its interaction with the Perfect will only go so far.

Moreover, the (roughly) synchronic stage of Greek represented by the Homeric texts needs a grammar of its own (i.e., one that is not a mere stop on a diachronic trajectory), and if pragmatic interaction with the Perfect (i.e., semantic blocking) will not fully account for the usage of the Aorist, then a semantic analysis seems warranted. On such an account, the Aorist shows the functional distribution that it does primarily because it is bound to do so by its semantic denotation. That is, the Aorist simply means what it means, and that meaning must be broad enough to encompass both its “perfect-like” and its terminative uses, yet narrow enough to exclude the complexive use (cf. Table 4.1 and discussion above). Perfective aspect, of a particular kind, is perhaps sufficient to capture this functional range, as the perfective gram in a language like Russian suggests. In Russian, the Perfective may be used in resultative and terminative contexts (Comrie 1976:58; cf. Willi 2018:382–3) but is excluded in complexive ones, where the Imperfective is used instead.⁷⁷ This would seem to be a good fit for the Homeric Aorist.

However, the Russian Perfective is not an entirely ideal model for the observed functional range of the Homeric Aorist. For one thing, the experiential interpretation largely falls to the Imperfective in Russian (Forsyth 1970:15 (cf. p.42)), whereas Homer favors the Perfect and (less often) the Aorist in this function. More importantly, as I observe in Hollenbaugh 2021b:\$5.4, the Aorist shows a significantly stronger tendency to have “perfect-like” values (including counter-sequential) in Homer than it does at later stages of Greek. Such a fact needs to be accounted for, concerning which the assignment of a simply perfective denotation ($t_E \subset t_A$) to the Homeric Aorist would be silent. Ideally, the analysis of the Homeric Aorist would account for the especially high rate of “perfect-like” uses in Homer as compared to later Greek, in addition to explaining its functional parameters already mentioned, while being consistent with known

77. The so-called “general-factual” Imperfective, which I take to denote the coextension relation $t_E = t_A$ (Hollenbaugh 2021b), most often corresponds to the complexive function, as is clear from examples and discussion in: Ö. Dahl 1985:74–7; Altshuler 2014; Arregui et al. 2014:330–4; Janda & Fábregas 2019:699–708, also with experiential examples.

trajectories of semantic change that would allow for a clear idea of how it developed from its proto-stage to the Homeric usage to later Greek. The latter part of this—Homeric to later Greek—is undertaken in Hollenbaugh 2021b. I will here seek only to explain the development of the Aorist going into Homer, while nonetheless adopting an analysis that makes predictions consistent with the later facts of Greek. Relevant here is the Vedic data, in which the Aorist has uniformly “perfect-like” values. If the Aorist in Homer is viewed as a kind of late-stage perfect gram (or, equivalently, an early-stage perfective gram), this would have the benefit of producing a coherent diachronic account of the development of the Aorist, changing from more “perfect-like” to less “perfect-like” over time. Such a trajectory is, of course, completely in keeping with a well-known grammaticalization pathway,⁷⁸ and a category intermediate between a perfect and a perfective gram has been independently posited in the typological and semantic literature (Bybee et al. 1994:78–81 “old anterior”).⁷⁹ I represent this grammaticalization pathway in (51), repeated from (9) in Section 2.1 above.

(51) stative-resultative » perfect » emergent perfective » perfective, simple past

For these reasons, I propose that the Aorist is not yet fully grammaticalized as a perfective gram of the familiar types, but neither does it fit the profile of a perfect gram, since perfect grams typically lack concentrative as a use. Typologically speaking, then, the Homeric Aorist is best understood as what I will call an “emergent perfective.” The term *emergent perfective* is my (hopefully more intuitive) relabeling of a category with a variety of confusing names in the typological literature on aspect (called “bad perfect” in Laca 2010:6–7 and “old anterior” in Bybee et al. 1994:78–81). By this label I simply refer to a gram type that exists in the synchronic grammars of some languages (including the language of Homer) and has properties of both the perfect and the perfective gram types but cannot be adequately characterized as either one. From a diachronic perspective, this represents an intermediate stage between a perfect and perfective gram on the grammaticalization pathway shown in (51) above. Yet it has real, synchronic status as a grammatical category, which can be defined semantically—a definition I will make explicit

78. See especially Bybee et al. 1994; Deo 2015b; Condoravdi & Deo 2014.

79. That the Greek Aorist represents an “old anterior” has been suggested already by Bozzone 2011.

in the following section (see (52)).

In concrete terms, I take the difference between the perfect gram type and the emergent perfective gram type to be that the perfect requires that assertion time (t_A) include speech time (t_S) or local evaluation time (t_0), while the emergent perfective does not.⁸⁰ The difference between the emergent perfective and fully grammaticalized perfective gram types is that the former requires that eventuality time at least partially precede speech/evaluation time ($t_E \preceq t_{0/S}$), while the latter does not.⁸¹ The simple past gram type (neutral aspect) requires only an overlap relation between eventuality time and assertion time ($t_E \circ t_A$) and that assertion time at least partially precede speech/evaluation time ($t_A \preceq t_{0/S}$), which is to say that it is past in tense. The change from perfect to emergent perfective to perfective or simple past over time is what is meant by “aoristic drift” (cf. Willi 2018:411–412), which corresponds to the grammaticalization pathway (or “cline”) in (51) above. Each subsequent stage on this cline shows a “weakening” (or broadening) of the semantics associated with the form in question.

4.5 Denotation of the Homeric Aorist

Based on the data summarized in Table 4.1 above, the Homeric Aorist can be identified as an emergent perfective gram, whose denotation is given in (52). Note that “ t_e ” denotes the runtime or temporal correlate of the eventuality instantiating the eventuality description P . That is, it corresponds to what I have been notating as “ t_E ” so far. The lambda operator (λ) may be taken to abstract over the variables (P, t_A) and to ensure that they pick out exactly the right set of referents.

(52) EMERGENT-PERFECTIVE DENOTATION OF THE AORIST IN HOMERIC GREEK

$$[\lambda P \lambda t_A. \exists e (t_e \subset t_A \wedge t_e \preceq t_0 \wedge P(e) = 1)]$$

For some eventuality e , eventuality time t_e is properly included in assertion time t_A , and

80. So, to be precise, the denotation of perfect aspect is: $[\lambda P \lambda t_A. \exists e (t_e \subset t_A \wedge t_e \preceq t_0 \wedge t_A \supseteq t_0 \wedge P(e) = 1)]$. Contrast this with the emergent perfective denotation in (52), which is slightly “weaker” in that it lacks the requirement that $t_A \supseteq t_0$. Cf. Section 2.2.2 for a fuller explanation.

81. Concretely, the denotation of perfective aspect is: $[\lambda P \lambda t_A. \exists e (t_e \subseteq t_A \wedge P(e) = 1)]$.

the eventuality time at least partially precedes the local evaluation time t_0 (by default equal to speech time), and the eventuality description P applied to the eventuality e is true (=1).

On my analysis, the Aorist denotes an operator “emergent perfective.” Following standard treatments of aspect in the semantics literature, I take this to be a function from predicates of eventualities (or eventuality descriptions) to predicates of times. The Aorist is thus an operator that applies to some eventuality description P and returns the set of those intervals t_A that properly include the runtime of an eventuality of type P , which is constrained to lie before or at the time of evaluation t_0 . The set of intervals returned by the Aorist amounts to all potential assertion times for the resulting sentence. This means that at any context at which a sentence with Aorist morphology is asserted, the salient assertion time at the context will be understood to be a member of the Aorist-modified description.

Since nothing is said in (52) about the relation between assertion time (t_A) and speech/evaluation time ($t_{0/s}$), assertion time is free to precede the evaluation time (i.e., $t_A < t_0$), which corresponds to past tense (following Klein 1994:124). This, coupled with the fact that (52) requires eventuality time to be fully included in assertion time, is what permits the various terminative uses associated with the Aorist, as enumerated in Table 4.1, above all the concentrative-sequential reading (represented in Figure 2.2 above).⁸² This is also what sets the Homeric Greek Aorist apart from plain perfect grams, which typically are not compatible with the temporal relation $t_A < t_0$ (cf. n.80 above), and distinguishes it as an emergent perfective (permitting but not requiring that $t_A \geq t_0$).

The denotation in (52) is thus also compatible with the relation $t_A \geq t_0$, which yields the present perfect readings of the Aorist (resultative, experiential, and stative), as discussed above and represented in Figure 2.1. This allows the Aorist to have its well attested “perfect-like” in-

82. On the inceptive reading see now Hollenbaugh 2020c and cf. above. I do not here attempt to solve the perennial problem of the gnomic Aorist, which I have addressed elsewhere (Hollenbaugh 2020b). I will say here only that the denotations presented in this section are no less compatible with the gnomic reading of the Aorist than any other proposals that have (to my knowledge) been put forth. Various other readings of the Homeric Aorist, such as the pluractional or the past counterfactual uses pose no problem for the denotation presented here but are also not of particular interest for the aims of this section and are accordingly passed by in silence.

interpretations, namely the resultative and experiential.

The relation $t_E \leq t_0$ in (52) requires only that t_E at least *partially* precede t_0 . Because this precedence needs only to be partial, (52) permits a relation such that t_E *properly includes* t_0 . I take cases of this sort to give rise to the stative perfect use of the Aorist of the type seen in (31) above (i.e., $t_e \supset t_0$, where the eventuality e is a state predicate), which is represented by t_E' in Figure 2.1.

Crucially, (52) excludes the complexive reading, such that eventuality time and assertion time must not be coextensive ($t_E \neq t_A$). As noted above, the complexive reading of the Aorist is extremely marginal in Homeric Greek. This cannot be explained by a blocking account, since complexive meaning is regularly expressed by the Imperfect, which is the semantically broader functional category (more specific categories typically block broader ones, not the other way around). For this reason, I formulate the denotation of the Aorist in (52) so as to regularly exclude the complexive interpretation by excluding the possibility of the coextension of eventuality time and assertion time.

Under certain syntactic or pragmatic conditions, however, it seems that the complexive reading (or, at least, uses resembling it) could occasionally arise already in Homer. This is unproblematic, given that a basic assumption of grammaticalization adopted in this analysis is that an interpretation that is irregularly associated with some morphological category (such as the Aorist) only when triggered by an especially salient context (syntactic and/or discursive) at one stage of a language is often reinterpreted as part of the notional content expressed by that morphological category at a later stage of the same language. So, if we find that the Aorist at the Classical stage regularly attests complexive uses (as we do), it is assumed that its association with such interpretations must have come from *somewhere*, in order to have been available for reinterpretation as part of the notional content of the Aorist in the first place. In this way, I take grammatical “leakage” at one stage (i.e., contextually driven exceptional interpretations of a form) to give rise to grammaticality at a later stage (cf. Deo 2015a for discussion of how grammaticalization may proceed).

The universal interpretation of the Aorist, if its apparent attestations can be taken seriously,

is also extremely marginal. Such a reading would perhaps be disfavored by the requirement that eventuality time and assertion time not be coextensive ($t_E \neq t_A$), since universal readings are often complexive (type ‘I have been living in Chicago for two years’). However, not all universal readings are necessarily complexive, and, contrary to what is often assumed, they do not actually require that the eventuality time include the speech/evaluation time. Consider a context in which a person sitting at a bar after work is asked how they are doing. They may felicitously reply *I’m exhausted; I’ve been working all afternoon, but I’m glad to be here now*. The speaker can have finished their work already, so the eventuality need not be ongoing at speech time, but the utterance must be made within the afternoon in which the work took place (one cannot felicitously say this sentence the next morning, for instance). So, the universal reading only strictly requires that the assertion time still hold at the evaluation time; the eventuality time may or may not be ongoing, provided that it is “close enough” to being coextensive with the assertion time. For this reason I take the universal reading to presuppose, minimally, that the assertion time includes speech/evaluation time and that the eventuality time extends from at or near the beginning of the assertion time up to (at least) near the beginning of the speech/evaluation time (cf. Figure 2.1 in §2.3 above).⁸³

So, unlike the complexive reading, the universal reading is not strictly ruled out by the denotation in (52). Yet, again unlike the complexive reading, a blocking account may readily explain the absence, or near absence, of universal uses of the Aorist in Homer.⁸⁴ There are two forms in Homeric Greek that are more typically used to convey universal meaning, namely the Present indicative and the Perfect indicative. The Present is better suited to universal interpretation than the Aorist in that it permits the coextension of eventuality time and assertion time ($t_E = t_A$) and it allows the eventuality time to include the assertion time ($t_E \supseteq t_A$). These possibilities allow for complexive universal interpretations, as well as progressive or continuous-state universal interpretations, in which the eventuality is asserted to be still ongoing. Both of these types

83. Of course, the universal reading of the Present indicative (cf. Smyth 1956:422–423) is available at all stages of Greek (and is consistently the most common strategy for its expression), since the Present not only allows t_E and t_A to be coextensive but also for t_E to include t_A ($t_E \supset t_A$), thus allowing the eventuality to begin in the past and extend up through speech/evaluation time ($t_{0/s}$), provided the right syntactic environment or discourse context.

84. But cf. with a somewhat different treatment of the universal reading Hollenbaugh 2021b:§6.1.1.

are more stereotypical universal interpretations than the type discussed in the preceding paragraph, to which the Aorist is limited. Similarly, the Perfect, which is almost always present referring in Homer, sometimes has a universal function, especially (though not exclusively) when built to state predicates (cf. Smyth 1956:423 and Gildersleeve & Miller 1900:87 “unity of time”). Both the Present and the Perfect may occur together with universal interpretations, as in (53), where the Perfect is used of a state predicate and the Present of an event predicate (but see differently Chantraine 1953 [2015]:229).

(53) UNIVERSAL PERFECT (STATE) AND PRESENT (EVENT)

ἄλλους δ' ὀτρύνοντες ἐνήσομεν, οἳ τὸ πάρος περ
θυμῶι ἦρα φέροντες ἀφροστᾶσ' _[PE.] οὐδὲ μάχονται _[PRES.] (*Il.* 14.131–2).

‘But spurring them on we will send the others in (to battle), who, even until now, giving in to their resentment, **have been staying away** _[PE.] and **have not been fighting** _[PRES.]’.

Because there are two forms in Homeric more specialized than the Aorist for universal meaning, we may assume that these block the application of Aorist in the universal contexts where it could otherwise apply. In post-Homeric Greek, as the Perfect comes to be used more frequently in the universal function (Gerö & von Stechow 2003:273–4), the occurrence of universal Aorist is even rarer and less certain than it is in Homeric.⁸⁵ This is expected if, as discussed by Gerö & von Stechow (2003:270–81), the Perfect had grammaticalized to a perfect (rather than a stative-resultative) gram by the time of Classical Greek, by which time the universal use of the Perfect is, as Gerö & von Stechow (2003:274) put it, “garden variety.” Thus, the more robust the universal use of the Perfect becomes, the more restricted becomes that of the Aorist, as a blocking analysis would predict.

Contrast the R̥gvedic situation, described in Section 9.6 below, in which the Perfect has grammaticalized beyond a perfect gram, and the Aorist accordingly has regular (if not very common) universal uses. This resembles what happens in post-Classical Greek, when the Perfect becomes a perfective gram (cf. Gerö & von Stechow 2003:281–3), and the Aorist again shows regular universal uses (Hollenbaugh 2021b:§5.3). The generalization, as it seems, is that in the case

85. The only one plausible example I know of is μόλις γὰρ ἔσχον νῦν ἐλεύθερον στόμα at Soph. *El.* 1256, if it means ‘For I have now hardly **been restraining** my mouth (from being) free’, as Kells (1973:203) takes it, comparing Soph. *Aj.* 995.

of two competing perfective (or emergent perfective) categories neither will necessarily block the application of the other in the universal function, since neither is better or worse suited to that meaning than the other. This is what we find in R̥gvedic Sanskrit and post-Classical Greek. But when one of the two forms is a perfective/emergent perfective and the other is a perfect, the perfect will typically block the application of the (emergent) perfective in this function. This is what we find in Classical Greek and, to a lesser degree, in Homeric. It should be emphasized, however, that the Present is by far the preferred form for this meaning at all stages of Greek and Sanskrit, especially for event predicates, and so the application of the Perfect and Aorist in universal contexts is always fairly limited.

The futurate use of the Aorist is restricted by the requirement in (52) that $t_E \leq t_0$, such that t_A (which includes t_E) cannot follow the evaluation time (future tense being typically defined as $t_0 < t_A$). This is desirable, since examples of futurate Aorists in Homer are few and limited to salient future contexts (Wackernagel 1926–8 [2009]:228–229). As discussed above, the few occurrences of futurate Aorists that we do find may be explained as “future shifted,” whereby t_0 is located not at speech time but at some point after speech time, and thus, under particular pragmatic conditions, t_A (which includes t_E) may be located in the future with respect to speech time (t_S), while the eventuality time still at least partially precedes the future-shifted evaluation time (t_0). Because the futurate reading is licensed only under special circumstances, all of the Homeric examples occur in a context of some salient future reference point, expressed by a verb in the Future tense or subjunctive mood.

The relation $t_E \leq t_0$ appropriately rules out the performative-reportive reading of the Aorist (of the type κατώμοσα ‘I (hereby) swear’ (Eur. *Or.* 1517)), as this use is not attested in Homer.⁸⁶ Following Bary (2012), E. Dahl (2010:81–2, 170, 297, 332), and Lloyd (1999), I take the performative-reportive reading of a perfective gram to arise when eventuality time is coexten-

86. Lloyd’s (1999:41) sole Homeric example (viz. *Il.* 14.95=17.173) is probably not performative-reportive but stative, while the Aorist at *Od.* 9.403 is more likely recent past/resultative. A more likely example of the reportive reading is *Il.* 21.150, though the stative and resultative readings cannot be excluded: τίς πόθεν εἰς ἀνδρῶν, ὃ μοι ἔτλης ἀντίος ἐλθεῖν; ‘Who among men (are you and) from where, that dare [have courage? have dared?] to come forth against me?’ Still, Schwyzler & Debrunner (1950:282) believe the usage is original and that its “popular” character may explain its scarcity in (or, more probably, total absence from) Homer. Some evidence for this comes from Mycenaean, where the performative use of the augmentless Aorist may be attested (cf. (19a) above).

sive with speech time (i.e., $t_E = t_S$). Since the relation $t_E \leq t_0$ excludes the possibility that the two intervals be coextensive (i.e., t_E must *at least partially precede* t_0), the performative-reportive reading is not available.⁸⁷

In these ways, (52) captures exactly those readings observed to be regularly available to the Aorist in Homeric Greek, while predicting the absence (or near absence) of those readings which are not regularly available to it. We thus have a semantics that accounts for the functional range observed for the Aorist. This analysis has the benefit of not only accounting for the facts of Homeric usage, but also of being compatible with the Aorist becoming more fully grammaticalized as a perfective gram in later Greek, broadening its meaning to include, among other things, the complexive interpretation (on which see Hollenbaugh 2021b), which in Homer is virtually restricted to the Imperfect (see §5). In addition, the denotation in (52) is compatible with an analysis of the Aorist as originating as a marker of perfect aspect, thereby matching (as we shall see) the Aorist in Vedic and providing a coherent account of the development of the Aorist that simultaneously predicts the attested usage in both Homer and the *Ṛgveda* and is in line with known tendencies of grammaticalization. This improves on prior treatments of the Greek Aorist as a perfective gram full stop, which cannot easily be reconciled with the Vedic data, make no predictions about the change in usage of the Aorist from Homer to Classical Greek observed in Hollenbaugh 2021b, and do not fully account for the precise functional range of the Aorist observed in Homeric Greek itself. Moreover, my analysis of the Aorist operates independent of the augment (unlike Willi 2018), thus making claims about the Aorist itself rather than about augmentation, which is not unique to the Aorist. With these things in mind, we may now turn our attention to the Homeric Imperfect.

87. If, however, as suggested in n.86 above, it is correct that Mycenaean has performative as a use of the Aorist, and that Homer lacks the performative-reportive use by accident of attestation or text type, then the denotation of (52) should be modified to match that of the *Ṛgvedic* Aorist in (101) below, such that in place of “ $t_e \leq t_0$ ” is “ $t_e \neq t_0$ ”, thereby permitting the eventuality time to be coextensive with the evaluation time and so rendering the Aorist compatible with performative-reportive interpretations.

CHAPTER 5

Imperfect with and without augment

As with the Aorist, I will begin by enumerating the readings available to the Imperfect and their frequencies in Homer, then evaluate its functional range and assign it a denotation that adequately accounts for its observed usage.⁸⁸

I repeat here the table from the previous chapter (Table 4.1 in §4 above), but now with the Imperfect column bolded for clarity (Table 5.1). See the beginning of Section 4 for an explanation of the notations used. I will explain each use of the Imperfect, with examples, in what follows.

TABLE 5.1: Readings of the Homeric Imperfect as compared to the Aorist and Pf./Plpf. ind.

| | AORIST | IMPERFECT | PERFECT/PLUPERFECT |
|-----|--------------------------------------|---------------------------------------------|-------------------------------------|
| 1. | × | progressive-conative {events} | intensive-frequentative {events} |
| 2. | stative {states} | continuous state {states} | stative {non-activities} |
| 3. | resultative/“hot news” {transfm.} | resultative? (rare) {transfm.} | resultative (rare) {transfm.} |
| 4. | experiential {any} | experiential? (rare) {any} | experiential {any} |
| 5. | counter-sequential {events} | counter-sequential {events} | (Plpf.) |
| 6. | present universal? {any} | (present/past) universal {any} | universal {any} |
| 7. | concentrative-sequential {events} | concentrative-sequential {events} | [concentrative]? {events} |
| 8. | [complexive]? {states} | complexive {non-transfm.} | (Plpf.) |
| 9. | inceptive {states} | inceptive {non-achiev.} | (Plpf.) |
| 10. | egressive (rare) {accomp.} | × | × |
| 11. | pluractional {any} | pluractional {any} | × |
| 12. | gnomic {any} | past habitual {any} | generic uses {any} |
| 13. | futurate? {transfm.} | × | × |
| 14. | past CF {any} | past CF {any} | (Plpf.: past CF) |

88. Note that the Imperfect is necessarily indicative, so I will generally not include the word *indicative* when referring to it.

Seeing as there is general confusion in the linguistic literature about what precisely is meant by the term “imperfective,” and since it is important to know what sort of thing the Homeric Imperfect *could* be before determining what it is, I begin with a discussion of imperfective grams cross linguistically. I then proceed in a manner similar to that employed for the Aorist above, first detailing the imperfective uses of the Imperfect (rows 1–2, with reference to 12), followed by its “perfect-like” uses (rows 3–6), its terminative uses (rows 7–10), and finally its pluractional and modal uses (rows 11–14). Given that the theoretical background for all but the first group has been discussed above, I will not repeat it here. The semantics of these groups of readings is assumed to be essentially the same for the Imperfect, *mutatis mutandis*, as they are described above for the Aorist. The theoretical basis for the readings of rows 1 and 2 are treated in Section 2.5 above (see especially Figure 2.6), with further details included for each in Section 5.1 below.

5.1 Imperfective readings of the Imperfect

1–2. PROGRESSIVE-CONATIVE AND CONTINUOUS-STATE IMPERFECT: Progressive readings refer to events (not states) that are ongoing at the relevant assertion time, such that the eventuality time properly includes the assertion time ($t_E \supset t_A$), as in the first clause of *I was jogging* (t_E) *when my phone rang* (t_A). I group the progressive and conative imperfective reading together, since I view the latter as simply a special case of the former (following E. Dahl 2010:70–1), though nothing depends on this assumption. The progressive-conative is thus a basic interpretation available to imperfective aspect (Comrie 1976:32–40; see Deo 2020 for discussion and review of the semantic literature). In its progressive use, the Homeric Imperfect characterizes an event as ongoing or incomplete in the past (Chantraine 1953 [2015]:222; e.g., *Il.* 18.550–1).

The continuous-state interpretation of the imperfective aspect (cf. Deo 2015b:4) is essentially the same as the progressive but applied to state predicates. I thus assume that the difference between the progressive and continuous-state interpretations is determined by predicate type alone: events in progress vs. ongoing states (in both cases eventuality time properly includes assertion time).⁸⁹ Due to their similarity, the continuous-state and progressive uses of

89. I assume what decides whether any given imperfective use will be interpreted as habitual or

the Homeric Imperfect can often be seen to occur side by side, as in (54).

(54) CONTINUOUS-STATE AND PROGRESSIVE USES OF THE IMPERFECT IN HOMER

ὅσσοι ἔτ' **ἔζων**ον περί τε ψυχέων **ἐμάχοντο**·

τοὺς δ' ἤδη ἐδάμασσε βιὸς καὶ ταρφέες ἰοί (*Od.* 22.245–6).

‘As many (wooers) as **were still living/alive** and **fighting** for their lives
while the bow and flurry of arrows had already overcome the rest’.

Note that the continuous-state use of the imperfective aspect ($t_E \supset t_A$) is quite different from the stative use of the perfect(ive) aspect described above for the Aorist ($t_E \supset t_0$). Most relevantly, the Homeric Imperfect has continuous-state readings only in the past time, while the stative Aorist is may have past or (more often) present reference. The two readings are for convenience placed in the same row in Tables 4.1 and 5.1 above, since they both refer to states that are in some sense ongoing, but their distribution and semantics are distinct. For this reason I group the continuous-state reading with the imperfective readings of the Imperfect rather than with its “perfect-like” readings (see below).

The conative variety of the progressive refers to a specific kind of incomplete event such that the goal or termination of the event has not (yet) been achieved (Chantraine 1953 [2015]:220–221; Gildersleeve & Miller 1900:93–94). It is thus most natural among achievement predicates. The Homeric Imperfect commonly has this function, as shown in (55).

(55) CONATIVE IMPERFECT IN HOMER

πορφύρεον δ' ἄρα κύμα διπετέος ποταμοῖο

ἵστατ' ἀειρόμενον· κατὰ δ' ἤρρε Πηλείωνα (*Il.* 21.326–7).

‘And the dark wave of the heaven-fed River
stood towering (over him), and **was seeking to/preparing to overwhelm** the son of
Peleus’.

On the habitual reading of imperfective aspect see discussion in Sections 4.3 and 2.5 above. This use of the Homeric Imperfect, along with its pluractional uses, will be treated below, but the frequencies of these readings are summarized in the immediately following paragraph. This

progressive/continuous-state to be largely a matter of pragmatics.

is done so as to give as clear a sense as possible of the Homeric distribution of readings most typically associated with imperfective aspect in the literature, namely the progressive-conative, continuous-state, habitual, and pluractional (iterative and distributive).

SUMMARY OF THE IMPERFECTIVE USAGE OF THE IMPERFECT: Out of 137 occurrences of the Imperfect in *Iliad* 1, 87 of which are securely interpreted, the Imperfect is progressive-conative 14 times (10%), 10 secure (11%). 10 of these are strictly progressive (71%) and 4 are conative (29%). The continuous-state interpretation of the Imperfect occurs 22 times (16%), 14 secure (16%). The past habitual interpretation of the Imperfect occurs 6 times (4%), 5 secure (6%). In addition, there are 2 pluractional uses of the Imperfect that are not habitual (1%), both securely read (2%). Combining these figures gives 44 occurrences of imperfective uses of the Imperfect in *Iliad* 1 (32%), of which 31 are securely interpreted (36%). It is thus clear that, though the Imperfect was fully capable of expressing imperfective aspect, this was far from its most common usage in my sample.

The Imperfect in its imperfective values in *Iliad* 1 (44 times) is securely augmented just 8 times (18%), securely augmentless 28 times (64%), and metrically uncertain 8 times (18%). Of the securely augmented cases, 3 occur in narrative within quoted speech (38%). Of the securely augmentless cases, 4 occur in narrative within quoted speech (14%), and a further 3 occur in non-narrative speech (11%), for a combined total of 7 (25%). As expected, the augment is strongly dispreferred on the Imperfect in general but is not altogether avoided. As discussed above in Section 3.2, the augment correlates with quoted speech in Homer overall, even for the Imperfect (see item v.). However, the correlation is only significant in the *Odyssey* and linguistically later portions of the *Iliad*. In the earlier portions of the *Iliad*, which includes Book 1, Drewitt (1912:44) reports no significant correlation of this kind, as my data supports (cf. n.35 above). What is clear is a correlation between use of the Imperfect (whether augmented or not) and use in narrative passages, including narration outside quoted speech (“narrative proper”) and narrative segments within quoted speech (“speech-narration”), there being only 3 exceptions to this. I therefore conclude that the Imperfect has a robust association with narrative contexts, even outside of its terminative uses (to be discussed below).

5.2 “Perfect-like” readings of the Imperfect

3. RESULTATIVE IMPERFECT(?): The Imperfect does not typically have a resultative function, at least not with present reference. It does have occasional counter-sequential usage, which may be understood in some instances as resultative in the past (treated below, and cf. discussion in §4.1 above). Some possible cases of the present-referring resultative Imperfect with present reference exist, however, such as Wackernagel’s (1926–8 [2009]:224) interpretation of νεόμην at *Od.* 4.585 as ‘I have [now] returned home’ (cf. Hollenbaugh 2018:36), though this may be better taken as an inceptive Imperfect (‘I set out for home’) (cf. Wackernagel 1926–8 [2009]:224, n.12). Other possible examples of this sort are given in (56).

(56) RESULTATIVE IMPERFECT IN HOMER(?): PRESENT REFERENCE

- a. ἄσσον ἵτ’· οὐ τί μοι ὕμμες ἐπαίτιοι, ἀλλ’ Ἀγαμέμνων,
ὃ σφῶϊ **προΐει** Βρισηΐδος εἵνεκα κόρυρης (*Il.* 1.335–6).
‘Come closer; it is not you who are blameworthy to me, but rather Agamemnon, who **has sent** you forth for the girl Briseis’.
- b. νῦν δ’ ἐτέρως **ἐβόλοντο**_[IPF.] θεοὶ κακὰ μητιόωντες,
οἳ κείνον μὲν ἄϊστον **ἐποίησαν**_[AOR.] περὶ πάντων
ἀνθρώπων (*Od.* 1.234–6).
‘But now [or ‘as things stand’] the gods, devising evil, **have willed**_[IPF.] otherwise, who **have made**_[AOR.] him the most invisible of all people’.

Given that the result state of Agamemnon’s ‘sending’ action still holds at the time of Achilles’ quoted speech, it is reasonable to assume that (56a) represents the resultative reading of the Imperfect with present reference. Similarly, the present-referring adverb νῦν ‘now’ in (56b) makes it difficult to interpret the IpF. ἐβόλοντο as anything other than “perfect-like” ‘have willed, chosen’,⁹⁰ particularly in conjunction with the resultative Aorist ἐποίησαν ‘have made’, with the re-

90. However, it is possible that this form ἐβόλοντο was used in lieu of a paradigmatically lacking Aorist form. Cf. the subjunctive at *Il.* 1.67, which in the transmitted text is “βούλεται” ‘may be willing’ (as though from an Aor. *βόλσ-ε-ται, though commonly corrected to Pres. sjv. βούληται; see Chantraine 1948 [2013]:442–3). In addition, at *Od.* 4.353 we find an apparently gnomic use of the Imperfect indicative: οἳ δ’ αἰεὶ βούλοντο θεοὶ μεμνήσθαι ἐφετμέων ‘For the gods always want (us) to be mindful of their commands’ (a universal interpretation ‘have always wanted’).

sults of both of these actions still in effect at the time of speech.⁹¹

Such readings are, of course, not incompatible with neutral aspect ($t_E \circ t_A$), which permits the relation $t_E \subset t_A \wedge t_A \supset t_0$ (cf. §2.3 above),⁹² so the fact that we find them on occasion lends further support to viewing the Imperfect as a simple past gram rather than a past imperfective (which do not typically have resultative as a use). Nonetheless, such interpretations of the Imperfect are extremely scarce, and I attribute their scarcity to blocking on the part of the Aorist, which, as shown in Section 4.4 above, is robustly resultative (cf. Hollenbaugh 2021b:§6.2). The only example of a resultative Imperfect in *Iliad* 1 is (56a) just cited (0.7%, not securely interpreted), which occurs in (non-narrative) quoted speech.

4. EXPERIENTIAL IMPERFECT(?): The Imperfect may sometimes be used to designate a past eventuality whose consequent state holds at speech time (t_s) or a salient reference point in the past (t_0). Compare the Russian past Imperfective in (present) experiential use (cf. §4.4 above and Forsyth 1970:15 (cf. p.42)). This use is not rare under negation with *past* time reference (treated below), but is fairly uncommon with present reference. Homer does, however, have several reasonably secure examples, as in (57).

(57) EXPERIENTIAL IMPERFECT IN HOMER: PRESENT REFERENCE

a. σείο μέγα κλέος αἰὲν ᾔκουον (*Od.* 16.241).

‘I’ve always **heard of** your great fame’.⁹³

b. ὥς τὸ πάρος περ ἀύπνους νύκτας ἴαυον (*Od.* 19.340–2).

‘As I’ve **spent** sleepless nights before’.⁹⁴

will not fit this context). Could this be another example of the augmentless Imperfect indicative in its gnomic value (continuing the IE injunctive) described by West (1989)? Cf. discussion in §3.2 and n.44 above.

91. In addition, the Ipf. ᾔκουον may in some cases be considered resultative ‘have heard of/about’ (e.g., *Od.* 3.193, 18.126), referring to knowledge attained by hearing (cf. Wackernagel 1926–8 [2009]:236 for discussion).

92. This assumes that the Imperfect is a past tense in the sense that assertion time must only *partially precede* evaluation time ($t_A \leq t_0$), as will be made explicit in the denotation of the Imperfect in (75) below, thus allowing assertion time to include evaluation time (cf. n.103 below).

93. Contrast the experiential use of the Aorist in (28b) above. The examples mentioned in n.91 above possibly belong here instead.

94. See similarly *Od.* 22.462–4, and cf. Chantraine 1953 [2015]:221.

As with the resultative Imperfect (cf. just above), the experiential use is by no means incompatible with neutral aspect ($t_E \circ t_A$) which permits the relation $t_E \subset t_A \wedge t_A \supset t_0$ (cf. §2.3 above), and I attribute its relative scarcity to blocking on the part of the Perfect, which is regularly experiential, and, to a lesser extent, the Aorist, which is occasionally experiential (cf. §4.1 above). *Iliad* 1 has no examples of a past- or present-referring experiential Imperfect.

5. COUNTER-SEQUENTIAL IMPERFECT: This is a fairly common use of the Imperfect in Homer (Delbrück 1897:269 and Friedrich 1974:15; Hollenbaugh 2018:37–38), which, again, may have a resultative (58a) or an experiential nuance (58b) (cf. similarly *Il.* 5.702, 13.521, 17.377, 22.437). Cross-linguistically, simple past grams (like the Imperfect), being neutral in aspect, are commonly employed in counter-sequential function, especially when no perfect(ive) or pluperfect grams exist in the language (Comrie 1976:58; cf., e.g., the Old and Middle English Preterite (Traugott 1992:183; Fischer 1992:245)).

(58) COUNTER-SEQUENTIAL IMPERFECT IN HOMER: RESULTATIVE (a) AND EXPERIENTIAL (b)

- a. Ἔκτωρ μὲν Πάτροκλον ἐπεὶ κλυτὰ τεύχε' ἀπηύρα_[IPF.],
εἶλχ' _[IPF.] (*Il.* 17.125–6).
'But Hector, when he **had stripped**_[IPF.] from Patroclus the glorious armor, began dragging_[IPF.] (him).'
- b. ὣς ἔφραπε_[IPF.] κλονέων πεδίον τότε φαίδιμος Αἴας,
δαΐζων ἵππους τε καὶ ἀνέρας. οὐδέ πω Ἔκτωρ
πεύθετ' _[IPF.], ἐπεὶ ῥα μάχης ἐπ' ἀριστερὰ μάρνατο_[IPF.] πάσης (*Il.* 11.496–8).
'Thus glorious Ajax, routing (them), drove_[IPF.] (them) over the plain at that time,
slaying both horses and men. But Hector **had** not yet **learned**_[IPF.] (about this), since
he was fighting_[IPF.] on the left of the whole battle'.

In some cases the habitual reading of the Imperfect may at the same time be interpreted as counter-sequential in the sense 'had been wont to (for some time)'. Such is the case of the only counter-sequential use of the Imperfect in *Iliad* 1 (0.7%, securely interpreted), given in (59).

(59) COUNTER-SEQUENTIAL IMPERFECT IN *ILIAD* 1: HABITUAL-UNIVERSAL

Ζεὺς δὲ πρὸς ὃν λέχος ἦι Ὀλύμπιος ἀστεροπητής,

ἐνθα πάρος κοιμάθ', ὅτε μιν γλυκὺς ὕπνος ἰκάνοι (*Il.* 1.609–10).

'And Olympian Zeus, the lightening-wielder, went to his bed, where he **had long since/thitherto been wont to take rest** when sweet sleep came to him'.

However, his example is classified as imperfective for the purposes of data analysis undertaken below, due to its clear habitual interpretation, to which I take its counter-sequential function to be subsidiary (cf. next item).

6. UNIVERSAL IMPERFECT: The Imperfect in Homer is attested in a universal perfect value with past reference time, as shown in (60), where the 'watchman' is still at his post keeping watch at the time of narration ($t_E \supseteq t_A$), and we are told that he has been doing so continuously for an entire year up to this point (when he sees Agamemnon). Cf. similarly ἔχεν πάλαι 'had long been holding' (*Il.* 23.871). For further Homeric examples see Gildersleeve & Miller 1900:98.

(60) UNIVERSAL IMPERFECT IN HOMER: PAST REFERENCE

τὸν δ' ἄρ' ἀπὸ σκοπιῆς εἶδε σκοπός, ὃν ῥα καθεῖσεν
Αἴγισθος δολόμητις ἄγων, ὑπὸ δ' ἔσχετο μισθόν,
χρυσοῦ δοιὰ τάλαντα· φύλασσε δ' ὃ γ' εἰς ἐνιαυτόν,
μή ἔ λάθοι παριών (*Od.* 4.524–7).

'And from his post a watchman saw him, whom deceitful Aegisthus had taken and stationed there, for he had offered as payment two talents of gold; and he **had been keeping watch for a year**, lest (Agamemnon) should pass by him unnoticed'.

This reading may be viewed as the past equivalent (counter-sequential) of the common Present universal construction (type 'have been doing/being such-and-such', as at *Il.* 14.269, 18.386, *Od.* 2.89–90), concerning which see Chantraine 1953 [2015]:221 and Smyth 1956:424, §1892. It may alternatively be viewed as a special case of the progressive interpretation ('was doing up until' and so '*had been doing*').

In addition, the Imperfect may, remarkably, also have *present* reference in its universal perfect use, as shown in (61)—so interpreted by most translators, since the action continues up to the time of the utterance in quoted speech.⁹⁵

95. Unless ἔφθιεν is an Aorist (with 3sg.mid. ἔφθιτο 'he perished'), for which see *LIV*²:150–1.

(61) UNIVERSAL IMPERFECT IN HOMER: PRESENT REFERENCE

ἦτοί ὃ τῆς ἀχέων φρένας ἔφθιεν (*Il.* 18.446).

‘Truly he **has been consuming** his heart grieving for her’.

The universal use (past- and present-referring) is entirely expected of a simple past tense (cf., e.g., the similar usage of the Middle English Preterite (Fischer 1992:245)), as it is aspectually neutral ($t_E \circ t_A$) and the relation $t_A \leq t_0$ requires only that the eventuality time *partially precede* the evaluation time (see (75) and cf. n.103 below).

The Imperfect never has universal interpretations in *Iliad* 1, except perhaps in the counter-sequential habitual example cited in (59) above.

SUMMARY OF THE “PERFECT-LIKE” USAGE OF THE IMPERFECT: In all, the “perfect-like” uses of the are few and far between. There is just one such use found in *Iliad* 1 (0.7%), which has been cited in (56a) above (not securely read). The counter-sequential example in (59) above is classed with the imperfective uses, being plainly habitual and pluractional. What I have tried to show here is the *compatibility* of the Imperfect with the “perfect-like” uses, citing a good number of examples outside of *Iliad* 1. Such uses would be anomalous if the Imperfect strictly denoted imperfective aspect but is expected if it was an aspectually neutral simple past gram. Given that Greek has two other functional categories specified for “perfect-like” functions, namely the Aorist and the Perfect, it is no surprise that these uses of the Imperfect, with its broader functional range, are seldom realized. Nonetheless, the mere existence of these uses is significant for determining the functional range—and thus the denotation—of the Homeric Imperfect. Though the “perfect-like” uses are expectedly blocked from occurring by the Aorist and Perfect under ordinary circumstances, still they may surface when, for example, the paradigm of the verb in question lacks an Aorist stem and the Imperfect “fills in” in its place. The fact that the Imperfect is capable of filling in for a paradigmatically lacking Aorist in this capacity (but the converse is not true) tells us something about the meaning of the Imperfect, namely that it must be semantically compatible with “perfect like” interpretations.

5.3 Terminative readings of the Imperfect

7. CONCENTRATIVE-SEQUENTIAL IMPERFECT: This refers to the Imperfect in a use very similar (or identical) to that described above for the Aorist (§4.2), which is extremely common in Homer (Wackernagel 1926–8 [2009]:235). On this use of the Imperfect in Homer (and Ancient Greek in general) see especially Friedrich 1974:14–6; Schwyzer & Debrunner 1950:276–7; Kühner–Gerth:143–144; Hollenbaugh 2018:28–39 (with further examples). I provide examples in (62) ((62a) repeated from (27) above). As with the concentrative Aorist, the Imperfect is regularly used in sequential narration, as seen in (62a) and (62b), but may also be used of an isolated reference to a past event, as seen in (62c). It frequently alternates with the Aorist in sequential narration, as (62a) and (62b) show.

(62) CONCENTRATIVE IMPERFECT IN HOMER: SEQUENTIAL (a–b) AND NON-SEQUENTIAL (c)

- a. Ἀτρεὺς δὲ θνήσκων ἔλιπεν_[AOR.] πολύαρνι Θυέστῃ,
αὐτὰρ ὁ αὖτε Θυέστ' Ἀγαμέμνονι λείπε_[IPF.] φορῆναι (Hom. *Il.* 2.106–7).
'And Atreus, upon his death, left_[AOR.] (the scepter) to Thyestes rich in flocks,
and Thyestes in turn left_[IPF.] it for Agamemnon to bear' (ex. Wackernagel 1926–8 [2009]:235).⁹⁶
- b. ὠιχόμεθ' _[IPF.] ἐς Θήβην, ἱερὴν πόλιν Ἡετίωνος,
τὴν δὲ διεπράθομέν_[AOR.] τε καὶ ἥγομεν_[IPF.] ἐνθάδε πάντα (*Il.* 1.366–7).

96. On this example, cf. Crespo 2014:74: “The conclusion to be drawn is that the imperfect may refer to an action that is either simultaneous *or subsequent* to the action denoted by the aorist” (emphasis added). Some have made the (*ad hoc*) claim that the Imperfect is used here to indicate that the event has lasting effects, since Agamemnon is the one who remains in possession of the scepter at this point in the narrative (Chantraine 1953 [2015]:224–5; cf. Rijksbaron 2002:18–9). However, the ‘leaving’ event is in every sense complete by this time (Thyestes is not in the process of leaving the scepter behind); what is still ongoing is the ‘bearing’ event expressed by the Present (Pres.) infinitive φορῆναι. Agamemnon’s continued bearing of the scepter is true independent of Thyestes’ action of leaving it behind, which is an event located completely in the past. And if the continued effects of the *leaving* event were at issue, we might, if anything, rather expect an *Aorist* to be used (as, e.g., at *Il.* 10.406), signifying ‘has left’, since the Aorist is the form regularly used in Homer to refer to “result states,” or states continuing as a result of a past action (cf. Chantraine 1953 [2015]:214; Schwyzer & Debrunner 1950:281–2; Wackernagel 1926–8 [2009]:227; Delbrück 1879:107–8; 1897:280–281). Cf. also Friedrich 1974:10: “The imperfect, unlike the present [and] aorist. . . may not run into or include the time of the present speech situation.” Further, many occurrences of the verb λείπω ‘leave’ in the Imperfect *do not* show continued effects, such as *Il.* 19.288: ζῶν μὲν σε ἔλειπον ἐγὼ κλισίῃθεν ἰοῦσα ‘I left you here alive when I went away from the shelter’ (to a now dead Patroclus; cf. similarly *Od.* 4.112), while the Aorist can be used for ‘leaving’ events that have permanent effects (e.g., *Il.* 16.410: πεσόντα δέ μιν λίπε θυμός ‘and having fallen his spirit left him’).

‘We **went**_[IPE] to Thebes, the holy city of Eetion, and then we sacked_[AOR.] it and **led**_[IPE] hither all (its spoils)’.⁹⁷

c. ὦ μοι τέκνον ἐμόν, τί νύ σ’ **ἔτρεφον** (*Il.* 1.414).

‘Oh dear, my child, why then **did I raise** you?’

Interestingly, the Imperfect can be substituted for an Aorist when it better suits the meter, as seen in (63).

(63) IMPERFECT FOR AORIST: METRICAL SUBSTITUTION

ἐχ δ’ εὐνὰς ἔβαλον_[AOR.], κατὰ δὲ πρυμνήσι’ ἔδησαν_[AOR.],

ἐχ δὲ καὶ αὐτοὶ βαῖνον_[IPE] ἐπὶ ῥηγμῖνι θαλάσσης,

ἐχ δ’ ἐκατόμβην βῆσαν_[AOR.] ἐκηβόλωι Ἀπόλλωνι.

ἐχ δὲ Χρυσῆς νηὸς βῆ_[AOR.] ποντοπόροιο (*Il.* 1.436–9).

‘Then they cast out_[AOR.] the anchors, and tied down_[AOR.] the stern-lines; and they themselves **went out**_[IPE] upon the surf of the sea, and they drove out_[AOR.] the hecatomb for Apollo far-shooter; and Chryseis went out_[AOR.] from the sea-faring ship’.

The Ipfc. βαῖνον ‘went out’ amid a sea of concentrative-sequential Aorists is striking, particularly since it does not seem to have any special (contrastive) value that would motivate its use here. As stated in *BK* (149), Schwyzler & Debrunner’s (1950:278) “context-sensitive” explanation is not successful, as there can be nothing particularly “imperfective” about βαῖνον as opposed to the verbs surrounding it. The same verse occurs at *Od.* 15.499 and *HH* 3.506. Yet, crucially, the similar verses at *Od.* 9.150, 9.547, and 12.6, where the context calls for a first-person plural instead, all have the Aor.1pl. βῆμεν where (63) has Ipfc.3pl. βαῖνον: ἐχ δὲ καὶ αὐτοὶ βῆμεν ἐπὶ ῥηγμῖνι θαλάσσης ‘and we ourselves went out upon the surf of the sea’. The use of Ipfc. βαῖνον is therefore a metrically conditioned alternative to Aor. ἔβαν, which would not fit the meter of *Il.* 1.437 in (63). The fact that such a substitution was *possible*, however, presupposes that the Imperfect was compatible with concentrative interpretation (cf. discussion in 5.2 above). For a functional category is only viable as a substitute for another if it is grammatical in the intended meaning. So, for instance, it would be absurd to use a Future indicative in place of the Aorist here, since

97. The linear order of the Aorist and Imperfect in (62a) and (62b) is not informative, as some have supposed, given that the opposite order is often attested as well, as in *Il.* 1.446–7 and 1.584–5.

the Future is semantically incompatible with past concentrative interpretation. Yet the Imperfect is able to be so used, which minimally must mean that the concentrative interpretation was not incompatible with its denotation.

The concentrative use of the Imperfect is common in *Iliad* 1, as in Homer generally. Of the 137 Imperfects in *Iliad* 1 (87 securely interpreted), 83 are concentrative (61%), 52 securely interpreted (60%). Nearly all of these occur in either narrative proper (72, 87%) or speech-narration (10, 12%), with only 1 exception in non-narrative quoted speech (1%), cited in (62c) (its augment is metrically uncertain). 31 have metrically assured augments (37%), 24 are securely augmentless (29%), and 28 are metrically uncertain (34%). As expected, the augment is dispreferred on the Imperfect, though not by a very wide margin. If we exclude speech tags—which are all concentrative but favor the augment for independent reasons (cf. §3.2 above, item x.)—there are 48 concentrative Imperfects (35%), 37 secure (43%). Of these, 9 have metrically secure augments (15%) and 17 securely lack the augment (35%), and the well-known avoidance of the augment on the Imperfect thus becomes more apparent, as already observed for its imperfective uses (cf. §5.1 above).

Nonetheless, 15% is by no means a negligible amount, and any account of the augment that assumes that the augment is somehow at odds with the basic meaning of the Imperfect is bound to run into difficulties when attempting to explain the augmentation of the Imperfect that does occur, to a considerable degree, in both its imperfective and concentrative uses. Rather, it seems plain that it is the narrative context (both narrative proper and speech-narration) that tends to disfavor the augment—as has been observed in the case of the Aorist (cf. §4.2 and n.36 above)—and that nearly all Imperfects occur in narrative contexts simply by virtue of the fact that the Imperfect is a past tense.

The Imperfect is thus incidentally averse to the kinds of environments in which the augment is especially favored (or in which it is not actively disfavored). But this does not mean that the augment is particularly averse to any of the semantic interpretations of the Imperfect itself. Indeed, when we compare the concentrative (i.e., the most characteristically “perfective” reading) to the imperfective uses of the Imperfect, we find that the data does not show a statistically significant correlation between augmentation and perfectivity of interpretation ($p = 0.39$), as

shown by a Fisher's exact test applied to the following 2×2 contingency table. Data for the augmentation of the imperfective readings is taken from Section 5.1 above. Rows represent readings (imperfective vs. concentrative), while columns represent augmentation (augmented or not).

| | Augment | No augment |
|-------|---------|------------|
| ipfv. | 8 | 28 |
| conc. | 9 | 17 |

There is thus no reason to assume that the augment contributes a meaning of perfectivity to the verb on which it occurs (*contra* Willi 2018:385–9).

8. COMPLEXIVE IMPERFECT: The Imperfect is the *regular* way of expressing the complexive reading in Homer, in strong preference to the Aorist (Jacobsohn 1933:305–310). An example has been given in (16) above, repeated here as (64) (cf. Gildersleeve & Miller 1900:90–91 for further examples).⁹⁸

(64) COMPLEXIVE IMPERFECT IN HOMER

παννύχιοι μὲν ἔπειτα κάρη κομόωντες Ἀχαιοί
 δαίνυντο, Τρῶες δὲ κατὰ πόλιν ἦδ' ἐπίκουροι·
 παννύχιος δέ σφιν κακὰ μῆδετο μητίετα Ζεύς
 σμερδαλέα κτυπέων· (Il. 7.476–9).

‘Then, all night long the long-haired Achaeans **feasted**, and the Trojans likewise throughout the city, and their allies; and all night long Zeus, the counsellor, **plotted harm** against them, thundering terribly’.

As with the inceptive (see below), this use of the Imperfect is unrestricted by predicate type, except that practically the verb must belong to either the state, activity, or (perhaps) accomplishment situation types. In addition to the activity predicates quoted in (64) above, state predicates are quotable in such phrases as ἦϋδον παννύχιοι ‘they slept all night’ (Il. 2.2, 10.2, 24.678;

98. Note that some but by no means all such examples can be felicitously rendered by the English Progressive (cf. n.26 and §1.4 above). So, for instance, πᾶν δ' ἡμᾶρ φερόμεν [Ip.] at Il. 1.592 (see (41) above) cannot be read as ‘I was being borne all day (Ip.)’ but, given that Hephaestus’ landing follows in line 593, only as ‘I was borne all day’, being one of a series of events in sequence. The possibility of using the Progressive complexively in English thus cannot be taken to guarantee that the Greek usage was progressive/imperfective, nor to imply that the complexive interpretation is simply a special case of progressive or imperfective aspect.

Od. 7.288) or δύο νύκτας δύο τ' ἡμέατα συνεχῆς αἰεὶ / κείμεθ' 'for two nights and two days the whole time continuously we lay' (*Od.* 9.74–75; similarly *Od.* 10.142–143). Thus, in Homer the Imperfect is the preferred form for complexive usage even to state predicates,⁹⁹ unlike the situation in later Greek, where the Aorist is preferred for complexive *states* and the Imperfect applies elsewhere (see Hollenbaugh 2021b).

As noted above, when a past indicative verb occurs in the scope of an expression of extent or duration of time, such as παννύχιος 'all night long' (as in (64) above and (65) below) or ἐννῆμαρ 'for nine days', the verb form is invariably either Imperfect or Pluperfect (rarely Perfect), with the few possible exceptions mentioned above ((37)–(38)). Others include εἰνάνυχες 'for nine nights' (*Il.* 9.470) and εἰνάετες 'for nine years' (e.g., *Il.* 18.400, *Od.* 3.118, 5.106–107, 14.240, 22.228), always with an Imperfect. Illustrating the difference between the complexive use of the Imperfect and the concentrative use of the Aorist is (65).

(65) COMPLEXIVE IMPERFECT AFTER CONCENTRATIVE AORIST IN HOMER

δόρπον ἔπειθ' εἶλοντο_[AOR.] κατὰ στρατόν· αὐτὰρ Ἀχαιοί

παννύχιοι Πάτροκλον ἀνεστενάχοντο_[IPE.] γοῶντες (*Il.* 18.314–5).

'Then they took_[AOR.] their supper along the encampment. Meanwhile the Achaeans lamented_[IPE.] all night, mourning Patroclus'.

Even though both the Aorist and the Imperfect in (65) refer to an event of some duration, only the Imperfect occurs with an explicit indication of extent of time (παννύχιοι 'all night') and can be said to be complexive, such that the eventuality time (i.e., their mourning) lasts exactly as long as the assertion time (i.e., all night). The Aorist in this example, by contrast, refers to an event that, while non-momentary, is nevertheless fully contained within the assertion time and can be said to be concentrative-sequential.¹⁰⁰

99. Some of these are treated as complexive states resulting from the attainment of an event referred to by the lexical verb. An example is νύκτα δι' ἀμβροσίην μελεδήματα πατρός ἔγειρεν 'Throughout the ambrosial night anxiety for his father kept him awake' (*Od.* 15.8). The lexical item ἐγείρω typically means 'awaken', but here it refers to the state resulting from awakening (viz. being awake), which is said to hold for a given length of time (viz. all night long).

100. Other complexive uses of the Imperfect in Homer include: *Od.* 7.253–4, 9.82–4, 10.28–9, 80–1, 12.397–9, 429–30, 447–8, 14.249–53, 314–5, and 15.476–7. For the Imperfect with a definite number designating the extent of time in Homeric Greek see *Il.* 9.470, 18.400, 21.45; *Od.* 3.118, 5.106–7, 388–9, 9.74–5, 10.142–3, 22.228, 24.63–4, 14.240 17.515, 24.63–4; Hes. *Th.* 56.

In *Iliad* 1 there are 5 verbs with complexive interpretation, all of which are Imperfects (4%), 4 securely read (5%). All but one occur in narrative proper or speech-narrative. 1 is securely augmented (20%), 2 augmentless (40%), and 2 metrically uncertain (40%).

9. INCEPTIVE IMPERFECT: This is often called “inchoative” in the literature, referring to the use of the Imperfect to designate the entry into a state or event (most often activity predicates). It is unrestricted by predicate type, though achievements are dispreferred for practical reasons. For discussion and examples in the Greek grammatical literature see Rijksbaron 2002:17–18, 21; Schwyzer & Debrunner 1950:277; Chantraine 1953 [2015]:222; Jacobsohn 1933:308–309. On the inceptive interpretation of imperfective aspect cross-linguistically see Hedin 2000:250–252. For an analysis of inceptives in Greek see Hollenbaugh 2020c.

Examples of inceptive Imperfects in Homer are given in (66) (cf. also *Il.* 1.467–8, 9.662, and 17.125–6).

(66) INCEPTIVE IMPERFECT IN HOMER: ACTIVITY (a) AND STATE (b) PREDICATES

- a. τοῖσιν δὲ Χρύσηος μεγάλ' **ἤϋχετο** χεῖρας ἀνασχών (*Il.* 1.450).

‘Then Chryses, having lifted up his hands, **started praying** aloud for them’.

- b. ἀλλ' αὖτως ἀποβάντες **ἐκείμεθα** νηὸς ἅπαντες (*Od.* 13.281).

‘But having disembarked from the ship in such a state, we all **lay down**’ (ex. Chantraine 1953 [2015]:222).

The supposed scarcity of inceptive Imperfects in Homer, which are said to become more common in post-Homeric Greek (Friedrich 1974:10), along with the rarity of the inceptive Aorist in Homer as compared to later Greek (cf. §4.2 above) accords with the proposal of Hollenbaugh 2018 (followed here) that the Homeric verb system does not yet make a categorical contrast between perfective and imperfective aspect (whereas Classical Greek does; cf. Hollenbaugh 2020c, 2021a).

The inceptive Imperfect is indeed more scarce in *Iliad* 1 than the inceptive Aorist (cf. §4.2 above), there being only 4 inceptive Imperfects (4%) (none securely interpreted) as compared to 13 inceptive Aorists. All 4 occur in narrative proper or speech-narration. In contrast to the inceptive Aorist, however, which is restricted to state predicates, the inceptive Imperfect is built

to both state and (most often) event predicates, such as activities. This distribution is similar to that of later Greek, and also resembles the distribution observed for the complexive reading in Classical Greek (cf. above). Of the 4 inceptive Imperfects in *Iliad* 1, 1 is securely augmented (25%), 2 securely augmentless (50%), and 1 uncertain (25%), in keeping with the general tendency for the augment to be disfavored on the Imperfect (due most likely to the discourse context of its occurrence).

10. [EGRESSIVE IMPERFECT]: It is possible that there are some examples of egressive Imperfects in Homer, if, for example, we suppose that when $\beta\acute{\alpha}\lambda\lambda\epsilon$ has the meaning ‘struck’ rather than ‘shot’ (e.g., at *Il.* 1.52) this refers to the culmination of a more basic meaning of the lemma $\beta\acute{\alpha}\lambda\lambda\omega$ ‘shoot so as to hit’. The uncertainty of how to treat this lexical item has prevented me from including the possibility of an egressive Imperfect in Tables 4.1 and 5.1 above.

SUMMARY OF THE TERMINATIVE USAGE OF THE IMPERFECT: Taken together, the terminative readings of *Iliad* 1 total 92 (67%), 56 securely interpreted (64%). 33 of these are securely augmented (36%), 28 securely augmentless (30%), and 31 are metrically uncertain (34%). All of the securely augmented and augmentless cases are in narrative proper or speech-narration (the only example in quoted speech that occurs outside of narration being (62c) cited above). Setting aside speech tags (cf. under the heading for the concentrative Imperfect above, item 7.), there are 57 terminative examples (42%), 41 securely read (47%). Of these, 11 are securely augmented (19%), 21 securely augmentless (37%), and 25 metrically uncertain (44%). As discussed above, the exclusion of speech tags makes the general lack of augment on the Imperfect more apparent. See above under the heading for the concentrative Imperfect for a discussion of what the augmentation of the Imperfect can and cannot tell us. As with the concentrative interpretation, comparison of the augmentation of the Imperfect in its terminative uses versus its imperfective uses does not show a statistically significant correlation ($p = 0.29$), applying a Fisher’s exact test to the following contingency table.

| | Augment | No augment |
|-------|---------|------------|
| ipfv. | 8 | 28 |
| term. | 11 | 21 |

There is again no reason to assume that the augment contributes a meaning of perfectivity to the verb on which it occurs (*contra* Willi 2018:385–9).

5.4 Pluractional and modal readings of the Imperfect

11. PLURACTIONAL IMPERFECT: The Imperfect (without -σκ-) can refer to a pluractional eventuality obtaining in the past (iterative or distributive). It is unrestricted by predicate type, occurring with states (e.g., (67c) below and, with -σκ-, *Il.* 9.333) as well as events. The use of the modal particle ἄν/κέν with the Imperfect to mark iterativity (Smyth 1956:424) is post-Homeric (*ibid.*:403). For discussion see Friedrich 1974:10 and Chantraine 1953 [2015]:222. As with the Aorist, the pluractional Imperfect may be either iterative or distributive.

The iterative variety is exemplified in (67) (cf. also *Il.* 9.325–7, 19.85–6). The iterative Imperfect regularly occurs with adverbs of repetition, such as πολλάκις ‘often’ or ἡματα/νύκτας ‘during the day/night’, or with definite time spans, as in (67b).

(67) ITERATIVE-PLURACTIONAL IMPERFECT IN HOMERIC GREEK

- a. ἄζηχες γὰρ ὁμόκλεον ἀλλήλοισιν (*Il.* 15.658).

‘For incessantly they **kept calling out** to one another’.

- b. ἐννέα γὰρ οἱ νύκτας ἐμίσγετο μητίετα Ζεὺς (*Hes. Th.* 56).

‘Zeus the counsellor **slept with her** (Mnemoyne) [each night] for nine nights’.

- c. ἡματα μὲν σκοποὶ ἱζον_[IPF.] ἐπ’ ἄκριας ἡνεμοέσσας

αἰὲν ἐπασσύτεροι· ἅμα δ’ ἡελίῳ καταδύντι

οὐ ποτ’ ἐπ’ ἡπείρου νύκτ’ ἔσμεν_[AOR.], ἀλλ’ ἐνὶ πόντῳ

νηϊ θοῇι πλείοντες ἐμίνομεν_[IPF.] Ἥῳ δῖαν (*Od.* 16.365–8).

‘During the days watchmen **would sit**_[IPF.] upon the windy heights, always in quick succession, but when the sun would go down, we would never spend_[AOR.] the night on the shore, but over the deep sailing in our swift ship we **would wait**_[IPF.] for the bright Dawn’.

Examples of the distributive-pluractional Imperfect are given in (68). The distributive use often occurs with a form of ἕκαστος ‘each’, as in (68a).

(68) DISTRIBUTIVE-PLURACTIONAL IMPERFECT IN HOMER

- a. λυτο δ' ἄγων, λαοὶ δὲ θοὰς ἐπὶ νῆας ἕκαστοι

ἔσκιδοναντ' ἰέναι. τοὶ μὲν δόρποιο μέδοντο (*Il.* 24.1–2).

'Then was the assembly broken up, and the troops each to go to their own swift ships **dispersed**. The rest got to thinking of their supper'.

- b. δράγματα δ' ἄλλα μετ' ὄγμον ἐπήτριμα πίπτον ἔραζε,

ἄλλα δ' ἀμαλλοδετῆρες ἐν ἐλλεδανοῖσι δέοντο (*Il.* 18.552–3).

'Some handfuls **were falling** one after the other to the ground along the furrow, while others the binders of sheaves **were binding** in straw bands'.

As with the pluractional Aorists, the pluractional interpretations of the Imperfect do not preclude other interpretations that the Imperfect might have. Thus, a pluractional interpretation is always a special case of some other reading, including progressive, habitual, counter-sequential (e.g., *Il.* 17.408–9), concentrative, and so on.

In many instances, the suffix -σκ- is added to the Imperfect in Homer and Hesiod to overtly mark pluractionality (Chantraine 1948 [2013]:310–3), whether iterative or distributive, as in (69). Often these occur alongside Imperfects lacking the -σκ- suffix, as in (69a) (cf. also *Od.* 5.154, 9.183–4; *HH* 2.240, 5.209). Examples of the distributive use include: *Od.* 8.259 and (to a stage-level state predicate) *Il.* 9.333.

(69) ITERATIVE-PLURACTIONAL IMPERFECT IN -σκ- IN HOMER

- a. ῥέα μὲν γὰρ φεύγεσκεν_[IPF.] ὕπεκ Τρώων ὀρυμαγδοῦ,

ῥεῖα δ' ἐπαΐζασκε_[AOR.] πολὺν καθ' ὅμιλον ὀπάζων.

ἀλλ' οὐχ ἤρει_[IPF.] φῶτας, ὅτε σεύαιτο διώκειν (*Il.* 17.461–3).

'For easily he **would withdraw**_[IPF.] from the battle-din of the Trojans, and easily he would charge_[AOR.], chasing them through the great crowd. Yet he did/could not catch_[IPF.] (any) man as he drove them in pursuit'.

- b. οἱ μάλα πολλάκις υἱὸν

τειρόμενον σώεσxon ὑπ' Εὐρυσθέως ἀέθλων (*Il.* 8.362–3).

'Very often I **saved** his son, (being) exhausted by Eurystheus' labors'.

There are 15 pluractional Imperfects in *Iliad* 1 (11%), 12 securely read (14%). Of these, none are securely augmented, 11 are securely augmentless (73%), and 4 are metrically uncertain (27%). 4 of the 15 pluractional Imperfects are terminative (27%); the remaining 11 (73%) are non-terminative (imperfective)

12. HABITUAL IMPERFECT: This use is of fairly frequent occurrence from Homer onward (Schwyzer & Debrunner 1950:278–9, Smyth 1956:424, Gildersleeve & Miller 1900:89–90). It is unrestricted by predicate type (including states, as (70) shows). A representative example is given in (70). Note that here, in contrast to the pluractional use, there is no set quantity of iterations of the eventuality or a definite interval within which the eventuality can be said to have held true. Rather, it is a characteristic occurrence of ‘sleeping’. Other such examples include: *Od.* 11.598, 14.16, 24.209–10.

(70) HABITUAL IMPERFECT IN HOMER

παρ δὲ κύνες θήρεσσιν ἐοικότες αἰὲν ἱαυον

τέσσαρες (*Od.* 14.21–2).

‘By these always **slept** four dogs, savage as wild beasts’.

As (71) shows, the suffix -σκ- may have habitual or characterizing interpretations rather than strictly iterative- or distributive-pluractional (cf. discussion in §4.3 above). In (71a), the -σκ- Imperfect is habitual, while in (71b) the -σκ- Imperfect has a continuous-state or characterizing function, which occurs next to a habitual Imperfect without -σκ- (cf. Bianconi 2019:175–6).¹⁰¹

(71) HABITUAL AND CONTINUOUS-STATE IMPERFECTS IN -σκ- IN HOMER

a. νῦν γὰρ καταθήσω ἄεθλον,

τοὺς πελέκεας, τοὺς κείνος ἐνὶ μεγάροισιν ἐοῖσιν

ἴστασχα ἐξείης δρυόχους ὥς, δώδεκα πάντας (*Od.* 19.572–4).

‘For I will now appoint as the prize in a contest

those axes that he (Odysseus) in his halls

used to set up in a row, like props (for a ship), twelve in all’.

101. Other instances of the form φιλέεσκεν in the *Iliad* are plainly habitual and pluractional (see *Il.* 6.15, 9.450).

b. γρηῖ δέ μιν εἰκυῖα παλαιγενεῖ προσέειπεν

εἰροκόμῳ, ἣ οἱ Λακεδαίμονι ναιετοώσῃ

ἤσκειν εἴρια καλά, μάλιστα δέ μιν φιλέεσκεν (*Il.* 3.386–8).

‘And she spoke to her, likening herself to an old woman, a wool-carder who, while living in Lakedaimon, made/used to make beautiful things out of wool, and **loved** her above all’.

There are 6 habitual Imperfects in *Iliad* 1 (4%), 5 securely read (6%). Of these, none are securely augmented, and all 6 are securely augmentless (100%). Taken together with the lack of augmentation of the pluractional interpretations summarized above, there may be a special avoidance of the augment when the Imperfect is habitual and/or pluractional, but there is not enough data to know whether the complete lack of augment in such cases in *Iliad* 1 is coincidental or not.

GNOMIC IMPERFECT?: West (1989) observes the possibility of a gnomic use of the Imperfect on four or five occasions in Hesiod, the *Homeric Hymns*, and Homer (cf. §3.2 and nn.44 and 90 above). An example has been given above (exipfgnomnaug), repeated here as (72).

(72) AUGMENTLESS GNOMIC IMPERFECT IN HOMER

αὐτίκ' ἔπειθ' ὑπὸ ποσσὶν ἐδήσατο καλά πέδιλα

ἄμβρόσια χρύσεια, τὰ μιν φέρον_[IPE.] ἡμὲν ἐφ' ὑγρὴν ...

εἴλετο δὲ ῥάβδον, τῇ τ' ἀνδρῶν ὄμματα θέλγελ_[PRES.] (*Il.* 24.340–3).

‘At once he bound beneath his feet his fine sandals—golden, immortal—that **carry**_[IPE.] (carried?) him over the water ... and he took up the wand with which he charms_[PRES.] the eyes of men’.

West regards this use as a deep archaism, being a vestige of the gnomic/characterizing use of the ancient Indo-European category known as the Present “injunctive” (i.e., augmentless Imperfect), seen most clearly in Vedic Sanskrit (virtually restricted to the *R̥gveda*). All putative examples are to augmentless forms of the Imperfect, referring to characteristic behaviors of deities. Aspectually, this use poses no problem for the Imperfect, since its neutral aspect is as compatible with generic usage as is the Present indicative. Temporally, however, the use is difficult to understand from a synchronic point-of-view, since the Imperfect is otherwise only past

referring (or “perfect-like” in its occasional experiential and resultative uses). The use is probably to be understood along the same lines as the gnomic Aorist (however that may be), as fundamentally modal in nature, being delinked from its usual past reference. In any case, it is remarkable that the gnomic Aorist virtually requires the augment, while the Imperfect in these examples is not augmented. See Hollenbaugh 2020b for a full analysis of the augment and its implications for the gnomic usage of the Present injunctive (= augmentless Imperfect) and (in Greek only) the augmented Aorist.

14. COUNTERFACTUAL IMPERFECT: It is a peculiarity of Homer that the Imperfect in counterfactual conditional constructions (i.e., protasis with εἰ, apodosis with the modal particle ἄν/χέν) expresses only *past* counterfactuality (Chantraine 1953 [2015]:325, Goodwin 1889:96), while in later Greek the same construction regularly expresses *present* counterfactuality (but cf. Smyth 1956:518–9). An example is (73) (cf. similarly *Il.* 24.713–5; with optative apodosis at *Il.* 24.220–2).¹⁰²

(73) IMPERFECT PAST COUNTERFACTUAL IN HOMER

καί νύ κε τὸ τρίτον αὐτίς ἀναΐζαντ' ἐπάλαιον,
εἰ μὴ Ἀχιλλεὺς αὐτὸς ἀνίστατο καὶ κατέρυκεν (*Il.* 23.733–4).

‘And now having sprung up again a third time they **would have wrestled**, if Achilles himself **had not stood up** and **restrained** them’.

An example containing both the Imperfect and the Aorist is (74), though the verb εἰμί ‘be’ of course lacks an Aorist stem in any case (cf. similarly *Il.* 22.203, with Imperfect protasis εἰ μὴ οἱ... ἦντετο ‘if he had not encountered him’).

(74) PAST COUNTERFACTUAL IN HOMER WITH IMPERFECT AND AORIST

ἔνθα κε λοιγὸς ἔην_[IPE] καὶ ἀμήχανα ἔργα γένοντο_[AOR.]...
εἰ μὴ ἄρ' ὅξυ νόησε_[AOR.] πατὴρ ἀνδρῶν τε θεῶν τε (*Il.* 8.130–3).

‘Then **there would have been**_[IPE] ruin and unmanageable deeds **would have occurred**_[AOR.]...
if the father of men and gods **had not noticed**_[AOR.] in time’.

102. The Pluperfect can be used similarly, as at *Il.* 8.366: εἰ... εἶδε ‘if I had known’. Note that this example shows that counterfactuals in Greek are not limited by predicate type, being built to event or state predicates alike.

No examples of the counterfactual use of the Imperfect happen to occur in *Iliad* 1.

5.5 Functional range of the Homeric Imperfect

I summarize the functional range of the Imperfect in *Iliad* 1 in Table 5.2, where only the major usage groups are given, so that their relative frequency may be easily compared. Recall that the pluractional and modal uses (including habitual) are grouped as imperfective, a group which also includes the progressive and continuous-state uses. The group *terminative* includes the concentrative, complexive, and inceptive uses. Recall also that the counter-sequential example in (59) above is counted among the imperfective uses, due to its clear habitual-pluractional value.

TABLE 5.2: Semantic distribution of the Imperfect in *Iliad* 1

| READING TYPE | OCCURRENCE (137) | SECURELY READ (87) |
|----------------|------------------|--------------------|
| terminative | 92 (67%) | 56 (64%) |
| imperfective | 44 (32%) | 31 (36%) |
| “perfect-like” | 1 (0.7%) | 0 |

The facts are clear: While the Imperfect is the form used to express imperfective aspect in the past, this is not its only or even its most frequent use. Its imperfective uses are roughly half as common as its terminative uses.

Certainly, text type could play a role here, since the majority of the epics consists of narration. Other issues may also affect the frequency of imperfective uses of the Imperfect, most especially Greek’s tendency to use Present participles to refer to events ongoing in the past, where English (for example) would use a finite verb. There is thus likely to be some amount of blocking of the Imperfect by other functional categories in the Greek verb system in past imperfective contexts. Yet even if we assume this is so, the fact remains that the Imperfect is a tense regularly used in *sequential* narration in Homer, often alongside the Aorist in the same function. In fact the ratio of non-terminative to terminative uses of the Aorist in *Iliad* 1 (1:1.9, cf. Table 4.2 above) is very close to the ratio of imperfective to terminative uses of the Imperfect (1:2.1). Applying

a Fisher's exact test to the following contingency table does not show a significant correlation between terminative uses and verb form ($p = 0.82$).

| | Aorist | Imperfect |
|-----------|--------|-----------|
| term. | 151 | 92 |
| non-term. | 80 | 45 |

Just as the terminative and the “perfect-like” uses were both deemed to be regular uses of the Aorist (cf. §§4.4–4.5 above), so must both the terminative and the imperfective uses of the Imperfect be considered regular parts of its functional range and must, therefore, be compatible with its basic denotation. Cross-linguistically, the only category known to serve both imperfective and concentrative functions is the gram type known as a simple past tense. Grams of this type have been said to be neutral in aspect (cf. E. Dahl 2010:88, 216 and Grønn 2004, based on Smith's (1997:77–81) “neutral viewpoints”).

Though the analysis of Altshuler (2014) accounts well for the non-imperfective uses of certain imperfective grams, particularly imperfectives of the kind seen in Russian—what I have called “Type 2” imperfectives in §2.5 above ($t_E \subseteq t_A$)—it cannot readily account for grams of the type to which the western Slavic Imperfect belongs (what I have called Type 3), which are regularly used in past sequential narration. With no obvious alternative that will adequately account for the observed functional range of the Imperfect, particularly its concentrative-sequential function, I am bound to assume that it is neutral in aspect ($t_E \circ t_A$) and best aligns with the gram type known as a simple past (= Type 3 “imperfective”). The Homeric Imperfect is thus seen to be roughly comparable to the Imperfective of the western Slavic languages (Czech, etc.), to the simple Preterite of the Germanic languages (such as English), and, as I will verify in Part II, to the Imperfect in Vedic Sanskrit (a view independently argued for by E. Dahl (2010:186–216)).

5.6 Denotation of the Homeric Imperfect

For the reasons just discussed, I assume the denotation of the Imperfect in Homeric Greek was that of a simple past tense, as defined in (75). This constitutes the “neutral aspect” ($t_E \circ t_A$) in the past time ($t_A \leq t_E$). This denotation is maximally permissive in that it allows *any* relation to

hold between the two temporal parameters relevant to aspect, t_E and t_A , so long as one overlaps with (i.e., intersects with or includes) the other and the assertion time at least partially precedes the evaluation time.¹⁰³

(75) SIMPLE PAST DENOTATION OF THE IMPERFECT IN HOMERIC GREEK

$$[\lambda P.\lambda t_A.\exists e(t_e \circ t_A \wedge t_A \leq t_0 \wedge P(e) = 1)]$$

For some eventuality e , eventuality time t_e overlaps with assertion time t_A , and the assertion time at least partially precedes the local evaluation time t_0 , and the eventuality description P applied to the eventuality e is true (=1).

Such a denotation allows for concentrative-sequential and complexive uses, both found abundantly in Homer. It also permits all the other readings observed for the Imperfect enumerated above, including its occasional “perfect-like” readings. Futurate uses of the Imperfect are of course ruled out by the requirement that the Imperfect be past in tense ($t_A \leq t_0$).

Any other readings not typically expressed by the Imperfect—such as performative-reportive, resultative, or egressive—are assumed to be categorically blocked by one of the other functional categories, whose denotations are more specific (i.e., “stronger”), namely the Aorist and Perfect. Evidence for this blocking relationship can be seen by the fact that the Imperfect can be used in lieu of an Aorist that is lacking in the paradigm of a particular verb, such as $\nu\epsilon\acute{o}\mu\eta\nu$ ‘I have returned’ (see Wackernagel’s (1926–8 [2009]:224) discussion and cf. §5.2 above). That is, the Imperfect may sometimes have uses that it does not typically have (viz. “perfect-like”), particularly when it is “filling in” for a paradigmatically unavailable Aorist. Since the converse is not true—i.e., the Aorist does not have imperfective functions no matter what—the denotation of the Imperfect must permit a broader functional range than does the Aorist, even though not all of the readings that it is compatible with are realized in actual usage except under special circumstances of type just mentioned.

103. The relation “ $t_A < t_0$ ” (‘assertion time fully precedes evaluation time’) is how past tense is defined, e.g., by E. Dahl (2010:57–58, 67) and Klein (1994:124). However, such a denotation would exclude the possibility of present reference, which is commonly available to past tense grams across languages in “perfect-like” readings of the simple past (as in the case of the simple Preterite in American English, on which see §1.4 above). I therefore borrow E. Dahl’s (2010:57) “partial precedence” relation (\leq). This allows for t_A to overlap with or even include t_0 , as required in *present* perfect contexts (the present tense being defined as $t_A \geq t_0$ by E. Dahl (2010:58) and Klein (1994:124)), so long as t_A at least partially precedes t_0 .

CHAPTER 6

Comparison of the Homeric Aorist and Imperfect

Given that the Aorist and Imperfect often have the same function in past sequential narration in Homer, it may be wondered what the difference between the two categories is. I do not wish to suggest that they are identical in meaning. Indeed, the denotations given in (52) and (75) above entail that they are not. Yet having distinct meanings does not require that the truth conditions of the forms be different in all contexts and occurrences. Since the functional ranges of these two categories overlap to a considerable degree, and the denotations I have assigned them allow this, their distinctive meanings will often be neutralized in particular contexts. Because Homer is mostly narrative in nature, this neutralization happens more often than not, as both forms permit the concentrative-sequential use equally well (i.e., it is regular for both functional categories, in the sense that their denotations allow them to occur in sequential narrative contexts).

The difference between the two categories must therefore be described in terms of what each *can* do, rather than what it does do on any particular occasion. So, while the distinction between Aor. ἔλιπεν and Ip. λείπε ‘left’ is neutralized in the sequential narrative context seen in (62a) above, their distinct functional ranges can be observed by looking at other of their occurrences in Homer. Thus, while both forms are most often concentrative, and the Imperfect can be counter-sequential (*Il.* 23.640, *Od.* 12.201=12.403=14.301, 14.480) just as well as the Aorist (e.g., *Il.* 2.722), only the Aorist has resultative/recent past uses in the sense ‘have left’ (e.g., *Il.* 10.406).

A similar story can be told for the Aorist and Imperfect of τίθημι ‘put, place’. While the Imperfect and Aorist are both mostly concentrative in the meaning ‘placed’ (e.g., Imperfect: *Il.* 1.441, 446, 585, etc.; Aorist: *Il.* 1.2, 1.433, etc.), only the Aorist has resultative/recent past uses in the

sense ‘have put’ (e.g., *Il.* 3.321, 17.470, 21.82, etc.).

A survey of the Aorist and Imperfect usage of βαίνω ‘walk, go’ paints an even clearer picture. Again, both the Imperfect and the Aorist have concentrative uses (e.g., Imperfect: *Il.* 3.311, 13.665; Aorist: *Il.* 1.310, etc.), but the Imperfect also shows progressive uses fairly often (viz. *Il.* 2.510, 2.611, 9.589, 12.375, 15.384; *HH* 4.346), while the Aorist (when augmented) can be resultative/recent past (e.g., *Il.* 2.302, 4.180, 6.377, 6.386; *Od.* 4.817, 22.249) or experiential (*HH* 3.141).

Doing this sort of survey for verb after verb in Homer (and I have done it for several hundred) shows the same functional ranges for each category again and again: The Imperfect and Aorist may both be concentrative in similar or identical meanings, but where they differ the Imperfect will typically show progressive, continuous-state, or complexive uses, while the Aorist shows “perfect-like” uses.

An illustrative example of the difference between the Aorist and Imperfect built to the same verb in Homer can be seen in (76), where the Imperfect built to the verb φεύγω ‘flee’ has the terminative functions inceptive and concentrative in (76a), sequencing events in past narration, while the corresponding Aorist in (76b) is used in a resultative function.

(76) IMPERFECT VS. AORIST TO THE SAME VERB IN HOMER

- a. αὐτὰρ ἐγὼ σὺν νηυσὶν ἀολλέσιν, αἳ μοι ἔποντο_[IPF.],
φεύγον_[IPF.], ἐπεὶ γίνωσκον_[IPF.], ὃ δὴ κακὰ μῆδετο_[IPF.] δαίμων.
φεύγε_[IPF.] δὲ Τυδέος υἱὸς ἄρῆϊος, ὤρσε_[AOR.] δ’ ἑταίρους (*Hom. Od.* 3.165–7).
‘But I with the crowded ships that were following_[IPF.] me **took flight**_[IPF.], when I realized_[IPF.] that a divinity was intending_[IPF.] evil. And the warlike son of Tydeus **fled**_[IPF.] and urged on_[AOR.] his companions’.
- b. Ἀτρεΐδῃ ποῖόν σε ἔπος φύγεν_[AOR.] ἔρκος ὀδόντων; (*Il.* 4.350=14.83)
‘Son of Atreus, what kind of word **has escaped**_[AOR.] the fence of your teeth?’

Yet the IpF. φεύγον can also have imperfective uses (e.g., progressive at *Il.* 21.542), while the Aor. φύγεν can also have concentrative uses (e.g., *Il.* 21.493). Thus it can be said that the Aor. φύγεν characterizes the action FLEE as complete in the past and occurs in contexts where the result

state either persists at speech time ('has fled') or not ('fled'), while the Ipfc. φεῦγε characterizes the action FLEE as either complete in the past ('fled') or incomplete in the past ('was fleeing, used to flee, etc.').

The same principle also holds for suppletive paradigms, such as ἰκάνω 'come to, reach', which lacks an Aorist, and ἰκνέομαι 'go, come, arrive at', whose Aorist ἰκόμην is very frequent. The Ipfc. ἴκανε and Aor. ἰκόμην thus form parts of a suppletive paradigm. In (77) the Ipfc. ἴκανε most likely has a concentrative value 'reached' (so BK:148 "konfektiv"),¹⁰⁴ while the Aor. ἴκοντο has a clear counter-sequential value 'had come', being in a temporal ὅτε-clause dependent on a verb with past reference.

(77) SUPPLETIVE IMPERFECT VS. AORIST IN HOMER

ὥς ἄρα φωνήσας ἀπεβήσETO, τὸν δ' ἔλιπ' αὐτοῦ
 χωόμενον κατὰ θυμὸν ἐϋζώνοιο γυναιχός,
 τήν ῥα βίηι ἀέκοντος ἀπηύρων. αὐτὰρ Ὀδυσσεύς
 ἐς Χρύσην ἴκανε_[IPF.] ἄγων ἱερὴν ἑκατόμβην.
 οἱ δ' ὅτε δὴ λιμένος πολυβενθέος ἐντὸς ἴκοντο_[AOR.]
 ἱστία μὲν στείλαντο, θέσαν δ' ἐν νηϊ μελάνηι (Il. 1.428–33).

'Having spoken thus she went away, and left him there angry at heart about the fair-belted woman that they had taken away by force against his will; meanwhile Odysseus **reached**_[IPF.] Chryse, bearing the holy hecatomb. And when they **had come**_[AOR.] within the deep harbor, they furl'd the sails, and they stowed in the dark ship.'

Applying this sort of reasoning liberates us from the awkward problem of having to explain the difference between the Aorist and Imperfect on every occasion and gives us instead a clear prediction of where we should typically expect neutralization of their meanings (sequential narration) and where they should typically be distinct (imperfective and "perfect-like" interpretations). We can thus only get a sense of the difference between these categories for any one lex-

104. The progressive use of this Imperfect is only found at *Od.* 19.435. It is otherwise concentrative in the sense 'came (all the way) to, reached', often with αἶψα, τάχα 'forthwith, at once', *vel sim.* (e.g., *Il.* 1.431, 2.17, 2.168, 3.145, 5.868, 6.242, 6.370, 6.497, etc.; *Od.* 8.362, 11.13, 15.216, 17.28, 17.255, etc.; *Th.* 681, 697; *HH* 3.109, 3.218, 3.378, 3.423, 4.103, 5.68; negated at *Il.* 23.819), or else counter-sequential 'had come/reached' (*Il.* 4.210, 5.780, 6.237 (or prog.?), 6.297, 10.526, 13.240, 18.520, 23.138, 24.708; *Od.* 5.457, 6.136, 7.3, 8.74, 15.101; and possibly *Il.* 2.171, 6.392, 7.186; *Od.* 24.172 (or else conc.)), or iterative-pluractional (e.g., *Il.* 9.354, 15.686).

ical item by looking at all of its attestations in Homer and seeing how each is used in different contexts.

This usage-based approach is so powerful that it even sheds light on some notoriously tricky Aorist/Imperfect pairs like Ip^f. ἔτικτε ‘bore, begot’ vs. Aor. ἔτεκε ‘bore, have borne/begotten’. These are often said not to be distinct in meaning, as both seem to be used interchangeably in past sequential narration. The Imperfect is thus regularly concentrative (e.g., *Il.* 21.188, 24.497; *Od.* 19.181; *HH* 3.307), and can even be conjoined with an Aorist in the same function, as at *Od.* 18.322 (similarly *Il.* 11.224), though sometimes it is better understood as counter-sequential (e.g., *Il.* 2.628, 16.180(?); *Od.* 23.325(?); *HH* 2.253, 3.126, 3.307). The Aorist is likewise most commonly concentrative (e.g., *Il.* 6.345 (in temporal clause with πρῶτον ‘when first’), 13.450–1, 20.128, 24.210; *Od.* 7.198, 19.355), and it too is regular in counter-sequential contexts (e.g., *Il.* 2.313=327, 2.548, 5.313, 6.22, 7.469, 14.444, 14.492; *Od.* 11.307). Crucially, however, the Aorist is likely resultative on a number of occasions (viz. *Il.* 5.875, 22.87, 22.234, 22.485, 24.540; *HH* 3.14 (or exp.?), 3.317) and is at least once experiential (*Il.* 24.255=493).¹⁰⁵

This distribution is entirely in line with the typical functional ranges observed for the Imperfect and Aorist generally. So, while it is not incorrect to say that the Ip^f. ἔτικτε and ἔτεκε both mean simply ‘bore, begot’ in most cases, it is incorrect to say that the two forms have the same meaning, as shown by the fact that the Aorist can be used in contexts where the Imperfect cannot, namely for present-referring “perfect-like” uses. The two forms thus have manifestly different functional ranges, which is in line with the distinct denotations assigned to the Aorist and Imperfect generally, as given in (52) and (75) above.

The fact that the Aorist favors resultative interpretations may even explain Chantraine’s (1953 [2015]:225) observation that the Aor. ἔτεκε is in Homer used more often when the mother is the subject, while the Ip^f. ἔτικτε is used more often when the father is the subject. Since the mother’s role in child production results directly in the birth of a child, the Aorist may have originally been felt to be more appropriate to describing her agency in child bearing. The father’s

105. Notably, the Aor. ἔτεκε in its present-referring resultative/experiential functions occurs *exclusively* without the augment (τέχον, etc.). In its concentrative uses it occurs with or without augment. This is an awkward fact for those who view the augment as marking out “the speaker’s present and immediate situation” (Bakker (2005:127)).

role, by contrast, is located entirely in the past and only indirectly results in a child—a situation to which the simple past form (i.e., the Imperfect) seems to have been better suited (cf. n.96 above).¹⁰⁶

In sum, both the Aorist and the Imperfect are compatible with concentrative use. The Imperfect additionally has imperfective uses, because its denotation is broad enough to permit the relation $t_E \supseteq t_A$. It thus shows its distinctive character primarily in contexts favoring imperfective interpretations (also complexive). Even though the Imperfect is strictly compatible with “perfect-like” readings as well, only the Aorist is typically so used, because its denotation (as an emergent perfective) is more specifically suited to these interpretations. The Aorist thus blocks the application of the Imperfect in most contexts favoring “perfect-like” interpretations (see Hollenbaugh 2021b:§6.2 for details), thereby showing its distinctive character primarily in its “perfect-like” uses.

106. Nonetheless, this distinction, if it was ever real, breaks down very quickly after Homer. The *Theogony* shows utterly no differentiation between the two (e.g., *Th.* 212: καὶ Θάνατον, τέκε δ' Ὕπνον, ἔτικτε δὲ φύλον Ὀνειρώων ‘And (Night) gave birth to Death and Sleep and she gave birth to the race of Dreams’). In lyric and Attic drama, as well, we find no such distinction.

CHAPTER 7

The Perfect and Pluperfect indicative

As mentioned in the introduction, I will not go through each reading of the Perfect as I have done for the Aorist and Imperfect (but see the appendix to Hollenbaugh 2021b for an enumeration and discussion of this kind). However, it may be useful to give a summary, for the limited data that *Iliad* 1 provides, of the distribution of the Perfect's attested functions.¹⁰⁷ One important use of the Homeric Perfect that does not happen to occur in *Iliad* 1 is the “intensive-frequentative” use, of the type βέβρυχε ‘roars, keeps roaring’, which is generally assumed to be archaic.¹⁰⁸

There are 18 occurrences of the Perfect indicative in *Iliad* 1, of which 13 are securely interpreted. By far most common is the stative use, of which there are 13 (72%), 10 securely interpreted (77%). The stative use of the Perfect comes in two main varieties based on the situation type of the predicate. It express what I call “attained states,” which are typically built to transformative event verbs (i.e., achievements or accomplishments), of the type τέθνηκε ‘is dead’ to θνήσκω ‘die’ (e.g., *Il.* 7.328, 18.12). When combined with a transformative predicate, the Perfect asserts that there is a result state that holds at speech/evaluation time (t_0) and that that result state (in this case BE DEAD) is of the sort that follows from an event of the type denoted by the predicate (in this case DIE). Though this typically assumes a preceding event that has led to the result state expressed by the Perfect, the event itself is not part of the asserted con-

107. For discussion of the functions of the Perfect in Greek see Wackernagel 1926–8 [2009]:215–218; Schwyzer & Debrunner 1950:263–264, 286–287; Gildersleeve & Miller 1900:99–100; Chantraine 1953 [2015]:228–229. On the Pluperfect see Chantraine 1953 [2015]:231; Wackernagel 1926–8 [2009]:238; Gildersleeve & Miller 1900:103; Schwyzer & Debrunner 1950:287–288.

108. For discussion see Wackernagel 1926–8 [2009]:215–216; Chantraine 1953 [2015]:228–229; Schwyzer & Debrunner 1950:263–264, 286–287; Gildersleeve & Miller 1900:100–101.

tent of a verb in the Perfect (i.e., it is not at issue).¹⁰⁹ This is what distinguishes the stative from the resultative interpretation, which asserts the occurrence of an event of the type denoted by the predicate and only *implicates* that its result state still holds at speech/evaluation time (cf. Mittwoch 2008). When the Perfect morphology combines with a state predicate, on the other hand, there is no implication of a preceding event, since the lexical item does not itself denote an event. These are what I call “continuous states,” of the type ἔολπα ‘I hope’ (e.g., *Il.* 20.186).

Of the 13 stative Perfects in *Iliad* 1, 5 are of the “attained-state” variety (38%), 2 securely interpreted (20%). 8 are of the “continuous-state” variety (62%), all securely interpreted (80%). Of the remaining 5 Perfects in *Iliad* 1 (28%), 2 have experiential interpretations (40%, one is not securely interpreted), 1 seems to have a resultative interpretation (20%, not securely interpreted), 1 has a (non-sequential) concentrative use (20%), and 1 has a generic-habitual (= gnomic) use (20%).

The concentrative use, though it is non-sequential, is especially atypical of the Perfect at this stage of Greek. I provide the apparent example from *Iliad* 1 in (78).

(78) CONCENTRATIVE PERFECT IN HOMER

ναὶ μὰ τόδε σκῆπτρον· τὸ μὲν οὐ ποτε φύλλα καὶ ὄζους

φύσει, ἐπεὶ δὴ πρῶτα τομὴν ἐν ὄρεσσι **λέλοιπεν** (*Il.* 1.234–5).

‘(I will swear) by this scepter, which will never sprout leaves and shoots,

[and it has not done so] since first it **left** its stump in the mountains’.

Here, the Perfect occurs in a temporal ἐπεὶ-clause that must refer to action preceding the state described by φύσει ‘will sprout’, which makes it difficult to read this as stative (‘is gone (from)’). Further, the adverb πρῶτα clearly restricts the time reference of the act of leaving to the (remote) past (‘since first it left’). This makes it difficult to read λέλοιπεν as resultative ‘has left’ (compare the ungrammaticality of English **I have first done this*). Finally, the fact that the main verb is in the Future tense rules out a counter-sequential reading (‘since it had left’). Another possible example of a concentrative Perfect, without πρῶτα, may be found at *Il.* 21.156.

109. Given that the Perfect built to non-states outputs stative meaning, it may be said to function as a “stativizer” (i.e., it converts events into states).

By contrast, the Pluperfect, at least for certain lexical items, often has a concentrative interpretation in Homer and is even used in sequential narrative contexts (see Wackernagel 1926–8 [2009]:238 for discussion with examples), as in the formula $\acute{\alpha}\rho\acute{\omega}\rho\epsilon\iota$ δ' $\sigma\acute{\upsilon}\rho\alpha\nu\acute{o}\theta\epsilon\nu$ $\nu\acute{\upsilon}\zeta$ ‘and night **emerged** from heaven’ (e.g., *Od.* 5.294). Other Pluperfects commonly found in the concentrative function include $\beta\epsilon\beta\lambda\acute{\eta}\chi\epsilon\iota$ ‘struck, smote’ (e.g., *Il.* 5.66) and $\beta\epsilon\beta\acute{\eta}\chi\epsilon\iota$ ‘went’ (e.g., *Il.* 1.221). This usage is Archaic only, not occurring in Attic (Wackernagel 1926–8 [2009]:238).

There are 5 Pluperfects in *Iliad* 1, 4 securely interpreted. Of these, 2 are stative (40%), both securely read (50%) and both of the “continuous-state” variety. Of the remaining 3 (60%), 2 are concentrative-sequential (67%, one is not securely interpreted but still terminative (it could be read as inceptive)), and 1 is counter-sequential resultative (33%). All 5 Pluperfects in *Iliad* 1 lack the augment, 2 of which are metrically assured to do so (40%).

A summary of the readings of the Perfect in *Iliad* 1 is given in Table 7.1. Percentages are given out of the total number of Perfects and Pluperfects respectively.

TABLE 7.1: Frequency of uses of the Perfect and Pluperfect in *Iliad* 1

| | | Perfect (18) | Pluperfect (5) |
|-------------------------|--------------------|--------------|----------------|
| stative | “continuous state” | 8 (44%) | 2 (40%) |
| | “attained state” | 5 (28%) | 0 |
| experiential | | 2 (11%) | 0 |
| resultative | | 1 (6%) | 1 (20%) |
| concentrative | | 1 (6%) | 2 (40%) |
| generic-habitual/gnomic | | 1 (6%) | 0 |

It is not possible to say anything conclusive on the basis of this very limited data. However, it is at least clear that the usage of the Perfect as attested in *Iliad* 1 is in line with current assumptions about the meaning of the Perfect in Homer, namely that it is a stative-resultative gram (NB: *not* a perfect), which typically have stative as their primary interpretation (Bybee et al. 1994:54, 63–8). Still, the story is not so simple as it has perhaps been portrayed, as the Perfect also shows

readings more characteristic of perfect aspect (resultative, experiential, and universal)¹¹⁰ and even past terminative uses (concentrative), all of which suggest more grammaticized meaning (i.e., toward being a perfect/perfective gram) and will become more common at later stages of the language (see Gerö & von Stechow 2003).

110. On the universal uses of the Greek Perfect, see (53) and discussion in Section 4.5 above.

Part II

Aorist, Imperfect, and injunctive in the
Rgveda

Introduction

In contrast to Homer, the usage of the Aorist and Imperfect in the *R̥gveda* is relatively uncontroversial. It is a known fact that the Aorist regularly has “perfect-like” functions,¹¹¹ and that the Imperfect is the tense typically used to sequence events chronologically in the past.¹¹²

Slightly more controversial is whether or not the Imperfect was capable of expressing imperfective aspect. Whitney (1889:201) makes the strong claim that “[i]n no period of the Sanskrit language is there any expression of imperfect... time” (cf. similarly Kiparsky 1998:29, 56–7, n.3), by which he means what I mean by *past imperfective* (i.e., event or state ongoing in the past).¹¹³ E. Dahl (2010:209–13), on the other hand, adduces a few precious examples of the Imperfect used in what he claims are imperfective functions.¹¹⁴ The Imperfect also has some “perfect-like” uses (Whitney 1889:330 “occasionally employed in the aorist sense”), including counter-sequential (Delbrück 1897:269, E. Dahl 2010:197–201). Given its maximally broad functional range, I agree with E. Dahl’s (2010:216) assessment of it as a simple past tense, denoting neutral aspect ($t_E \circ t_A$).

Similarly controversial is the extent to which the Aorist is a “narrative tense.” Whitney (1889:329) says that the Aorist “has the value of a proper ‘perfect’,” signifying “something past which is viewed as completed with reference to the present.” He notes, however, that Aorist forms “are sometimes used narratively” in the Vedic hymns (ibid.:330). Despite observing its clear “perfect-like” functions, including resultative and experiential, E. Dahl (2010:264–9, 301)

111. Whitney 1889:201, 329; Delbrück 1897:240–1, 278–81; 1888:280–1, 285–6; Macdonell 1916:345–6; Wackernagel 1926–8 [2009]:227; Kiparsky 1998:39, 41–3, 45–6; E. Dahl 2010:264–9.

112. Whitney 1889:201, 278; Delbrück 1897:268 ff.; 1876:90 ff.; Hoffmann 1967:151; Kiparsky 1998:33; E. Dahl 2010:192–5, 201–9.

113. By contrast, the Present indicative does have imperfective functions, such as habitual and progressive (Whitney 1889:278). However, in my view the imperfective uses of the Present can be attributed to its present time reference, which naturally favors event-in-progress, continuous-state, and habitual interpretations, rather than to its aspectual meaning *per se* (cf. n.9 above).

114. Actually, however, I do not think that most of the Imperfects in E. Dahl’s (2010:209–13) examples (98) and (99) are imperfective in meaning, except perhaps (98c) and (98d), nor any of the references from *RV* II in his n.81 on p.210 (I have not verified the others). Even so, I do believe there is some evidence to suggest the Imperfect indicative is compatible with imperfective interpretations, particularly when built to state predicates (cf. Hollenbaugh 2018:25) and intensive stems (e.g., *ároravīt* ‘kept bellowing’ at *RV* II.11.10a.), which I present below in Section 10.

ultimately settles on perfective aspect for the denotation of the Aorist in the *Ṛgveda*. This is largely because of the Aorist’s “flexible time reference,” referring to events in the non-recent past and sequencing events chronologically in narration (E. Dahl 2010:269–74). Further, he notes its past terminative uses (ibid.:289–96), including (in my terms) concentrative, inceptive, and performative uses (ibid.:296–8). Yet he also mentions in passing the use of the Aorist in a sense that he translates with the English progressive Perfect (*jyók... āśayiṣṭhāḥ* ‘you have been lying for a long time’ at *RV* X.124.1d). This looks to be a universal perfect interpretation, which he had said earlier “seems not to be available for the Aorist Indicative” (p.21). If the Aorist can have universal interpretations, then it shows a functional range characteristic of perfect aspect. Yet it also has undeniable terminative uses, and E. Dahl’s (2010) analysis of it as a perfective aspect is certainly a reasonable compromise given the observed functional range of the Aorist. I will argue, nonetheless, that Kiparsky’s (1998:39, 41–3, 45–6) assessment of the Aorist as expressing a perfect aspect is basically correct, though it shows signs of grammaticalization toward perfective aspect along the familiar pathway (cf. (9) above). It may thus be characterized as a late-stage perfect or an “emergent perfective,” similar to the Aorist in Homer as described in Part 2 above. Differences between the two languages in the relative frequency of “perfect-like” uses vs. past terminative uses can be explained by a variety of language-specific factors both morphological and pragmatic (see §9.5 below).

A crucial difference from the Homeric tense–aspect system is that in the *Ṛgveda* there is a greater distinction in meaning between augmented and augmentless forms than there is in Homer. In addition to their past indicational functions, in which they are effectively equivalent to their augmented counterparts, the injunctive forms may also have present reference—progressive, performative-reportive, or gnomic—as well as certain modal functions, such as directive and future signification. The injunctive is thus an important feature of the verb system, which I was not able to give its due attention in Hollenbaugh 2018. To amend this, I include a detailed treatment of the Aorist and Present injunctive below. This reveals some patterns strikingly similar to Homer in terms of where the augmented and augmentless forms are used (e.g., augmentless Aorist in narration), though others are quite different (e.g., augmented Imperfect in narration, augmentless Aorist used gnomically). As in Homer, it will be seen that the aug-

mentless injunctive forms are compatible with all the same uses as the augmented indicatives (if different in proportion), showing that the temporal and aspectual meanings of the Aorist and Present/Imperfect are inherent to the verbal bases themselves rather than contributed by the augment.

I will proceed as I did for Homer in Part I: First, I show that the augment is not responsible for marking tense or aspect on the verb in the *R̥gveda* (§8). Then I give an overview of the usage of the Aorist indicative/injunctive (§9) and Present injunctive/Imperfect indicative (§10) with a description and examples of each interpretation, assessing the functional range of each form in its turn and assigning a denotation that captures the observed functional range. Lastly, I include a brief chapter on the usage of the Perfect and its interaction with the other verbal categories analyzed here (§11).

CHAPTER 8

The augment in the *R̥gveda*

8.1 Role of the augment in the *R̥gveda*

As in Homer, the augmented Aorist is avoided in “historical sense” (i.e., past terminative), as shown by Avery (1885:330), who says that in non-recent past contexts there is a “the tendency to obliterate the distinction of imperfect and aorist.” This is consistent with the data of *RV* II, where there are 53 augmented Aorists, of which 45 are securely read.¹¹⁵ Leaving aside performative and reportive uses (see §9 below), out of the 19 Aorists having concentrative or inceptive terminative functions in this book (9 securely interpreted), 7 are augmented (37%) and 12 are augmentless (63%) (= injunctive), a proportion of 1:1.7. By contrast, out of 49 present-referring (perfect-like) uses of the Aorist (viz. present stative, resultative, experiential, and universal), of which 41 are securely interpreted, 43 are augmented (88%) and 6 are augmentless (12%), a proportion of 1:7.2. Looking only at the securely interpreted and securely augmented/augmentless cases of “perfect-like” Aorists, 30 out of 35 are augmented (86%) and 5 augmentless (14%), a proportion of 1:6 (averaging these two figures gives 1:6.6). These are reminiscent of the proportions seen in *Iliad* 1 for augmented vs. augmentless Aorists (cf. §4 above). Leaving aside the metrically uncertain cases, the terminative uses of the Aorist in *Iliad* 1 securely have the augment 36 times (38%) and securely lack it 58 times (62%), a proportion of 1:1.6. Likewise for its present-referring “perfect-like” uses, 23 are securely augmented (61%), while 15 are securely augmentless (39%), a proportion of 1:1.5. As can be seen, the augment in both texts is preferred in present-referring “perfect-like” uses of the Aorist and dispreferred in its terminative uses.

A striking difference is how greatly the augmented forms outnumber the augmentless

115. On the notions of secure interpretations and augmentation see Section 1.5 above.

among the “perfect-like” uses, where the proportion of augmentless forms is staggeringly lower than in Homer. This is, in my view, due to the fact that the augmentless Aorists in the *Ṛgveda* are functionally distinct from the augmented, in that the augmentless forms can have modal/gnomic and performative interpretations. To rule these out, the augment is applied. As the modal/gnomic and performative interpretations of the Aorist injunctive are only available when the time reference is to the present, the interpretation of the Aorist is ambiguous between these and its indicatival uses only from the point-of-view of the present moment (cf. Hollenbaugh 2020b). That is, there are no Aorist injunctives with past modal interpretations of the type ‘might have done such-and-such’ or past habitual ‘used to do such-and-such’ but only present- or future-referring interpretations of the type *dāḥ* ‘give!’ (directive interpretation) or *út súvar gāt* ‘the sun rises’ at *RV* V.45.1c (gnomic-habitual interpretation). Therefore, it is only necessary to disambiguate the Aorist in its indicatival functions from its modal ones when the time reference is to the present, and this is why the augment is almost uniformly applied in the “perfect-like” uses of the Aorist, as it rules out all non-indicative interpretations. Because the time reference conditioning its use is present, adding the augment to the Aorist effectively leaves only the “perfect-like” interpretations accessible, which are present referring in the sense that assertion time includes speech time ($t_A \supseteq t_{0/s}$). Hence nearly all “perfect-like” uses of the Aorists are augmented. By contrast, in contexts of past reference, the augment is strictly unnecessary, as the context supplies the past interpretation and there are no reasonable alternative interpretations of the modal or habitual type available. Hence the vast majority of past-referring Aorists in the *Ṛgveda* are augmentless.

Importantly, the proportion of augmentless forms in past-referring contexts is very similar to that of Homer in the same contexts: 1 augmented to 1.7 augmentless in *Ṛgveda* II, as compared to 1 augmented to 1.6 augmentless in *Iliad* I. It is precisely in the context in which there is little or no risk of ambiguity (i.e., no available alternative interpretations) that the preference for augmentation is at its weakest. In contexts of present reference, on the other hand, where in Vedic several alternative interpretations are accessible, the augment is preferred by many magnitudes: about 1 augmentless to every 6 or 7 augmented. But in Homer the preference for the augment in such contexts is much weaker (1 augmentless to 1.5 augmented),

precisely because in Homeric grammar the injunctive has undergone a near total functional merger with the indicative such that the augmentless forms do not regularly have modal or gnomic interpretations available to them. In the absence of accessible alternative interpretations, the preference for augmentation in “perfect-like” uses in Homer (1:1.5) closely matches the proportion of its dispreference among the terminative uses (1:1.6)—clear preferences but not overwhelmingly robust. Likewise, in the *R̥gveda* the proportion of augmentless Aorists to augmented ones resembles that seen in Homer when the context is past (1:1.7)—where any alternative interpretations that the augment might be employed to rule out are inaccessible due to the context—whereas in contexts of present reference, where unlike Homer there are multiple accessible alternative interpretations, the preference for the augment is much stronger in the *R̥gveda* than that observed in Homer.

The distribution just described is entirely expected under the account of Hollenbaugh 2020b that the augment in Vedic is a marker of indicative mood, whereas in Homer it is simply a marker of “certainty” (a kind of evidential). Because in Vedic the augment excludes the modal uses of the Aorist (including habitual), it is almost required in contexts of present reference, where the speaker would run the risk of being misunderstood if the augment were not used. For instance, the Aor. inj. *dā́h* in a present context might be taken to mean ‘give!’ rather than ‘you have given’, so a speaker intending the latter uses the augment, which being an indicative marker rules out the modal interpretation ‘give!’, in order to unambiguously express the non-modal meaning ‘you have given’ (as, e.g., the Aor. ind. *ádāh* at *RV* X.15.12c).

In any case, it emerges clearly that in Vedic, as in Homeric, the augment is plainly not responsible for marking past tense, seeing as it is preferred in the present-referring “perfect-like” uses of the Aorist, nor is its use entailed by past time reference, seeing as the Aorist in non-recent past contexts disfavors augmentation.¹¹⁶ The augment is also unlikely to be a marker of

116. That the augment does not strictly require past reference in Vedic is corroborated by a handful of clearly augmented forms that must nonetheless be understood as referring to the *present* time: generic/gnomic (Ip̥f.), stative (Aor.), and performative (Aor.) (see, respectively, Hoffmann 1967:209–11, Delbrück 1897:239, and Schwyzler & Debrunner 1950:282). The stative and performative uses are available to the Aorist only. Both are cross-linguistically common uses of perfect(ive)s, so these may be readily derived from the perfect(ive) aspect of the Aorist. The (extremely marginal) gnomic uses of the Imperfect, however, are licensed only for forms whose injunctives are not viable for phonological reasons (see §10 below).

present tense for reasons similar to those discussed in regards to Homer (cf. §3.2 above). Its use is not required by present reference time, as the gnomic and presential functions of the Aorist are available only when the Aorist is *not* augmented, nor does the augment ever occur on the Present indicative. Conversely, the augment cannot be said to entail present time reference, as it is used with considerable frequency in the past terminative and counter-sequential functions of the Aorist (albeit less frequently than the injunctive in these contexts), and it is a regular part of the formation of the Imperfect (see below), which seldom has present reference.

As for aspect, the augment is demonstrably not required by perfective meaning, as can be seen from its regular omission from the Aorist in its past terminative uses (cf. §9 below for examples). As discussed above, the augment is in fact dispreferred in the terminative uses of the Aorist generally, so it cannot be the case that perfective aspect requires the use of the augment. Likewise, the augment is not always used in the “perfect-like” interpretations of the Aorist either—there are 7 clear injunctive examples in *RV* II alone—so it cannot be the case that the augment is required by “perfect-like” interpretations. Conversely, the augment can also not be said to entail “perfect like” interpretations, as it is found in past terminative uses—occasionally for the Aorist and regularly for the Imperfect. On the other hand, showing that the augment does not entail perfective aspect is trickier, due to the fact that imperfective meaning is so seldom expressed by finite verbs in the *R̥gveda*. Still, there are a few clear cases, as in (79), where the Imperfect and Present injunctive have likely imperfective interpretations, with the augment (79a) and without it (79b) (see further Hollenbaugh 2018:25).

(79) IMPERFECTIVE USES OF THE IMPERFECT (a) AND PRESENT INJUNCTIVE (b)

- a. *ároravīd*_[IPF.] *vṛ̥ṣṇo asya vājro amānuṣam yān mānuṣo nijúrvāt*_[PRES.SJV.] (*RV* II.11.10ab).

‘The mace of that bull **kept bellowing**_[IPF.], when Manu’s ally was about to lay low_[PRES.SJV.] Manu’s enemy’ (tr. mine).

- b. *dyāvo ná st̥bhiś citayanta*_[PRES.INJ.] *khādīno ví abhríyā ná dyutayanta*_[PRES.INJ.] *vṛ̥ṣṭáyah rudró yád...ájani*_[AOR.IND.] (*RV* II.34.2).

‘With their spangles (the Maruts) **looked like**_[PRES.INJ.] the heavens with their stars. They **were flashing forth**_[PRES.INJ.] like the rains from the storm clouds, when Rudra

had been begotten_[AOR.IND.]’ (tr. mine).

In (79a) the augmented Imperfect is built to an “intensive” stem, which typically express repetition of an event (i.e., iterative or frequentative pluractionality). We can thus be certain that the Ip_f. *ároravīt* has a multiple-event reading here and, given that the action of the dependent temporal clause is not yet completed (*yád... nijūrvāt* ‘when he was about to lay him low’), the sentence appears to represent Indra’s repeated striking of Vṛtra as an *ongoing* event in the past (expressed by the Ip_f. *ároravīt*).

(79b) refers to the birth of the Maruts, children of Rudra (see Jamison & Brereton 2014:450). The Pres. inj. *citayanta* ‘appeared, looked (like), resembled’ is built to the state predicate $\sqrt{cīt}$ ‘perceive, be seen, seem’, referring to how the Maruts looked in the time following their birth, which is an ongoing state of affairs. Similarly, the Pres. inj. *dyutayanta* is likely pluractional, describing the Maruts’ action of ‘flashing forth’ (t_E) as ongoing at the time following their birth (t_A), thus ‘they were flashing forth, kept flashing forth’.

If correctly interpreted, it follows from the examples in (79), which are both imperfective in interpretation, that the augment neither entails perfective aspect nor is required by imperfective aspect. As in Homeric grammar, the augment in the *Ṛgveda* must not be understood as contributing any aspectual or temporal information of its own. Rather, tense and/or aspect are expressed by the verbal bases themselves, and these are therefore the object of study in Sections 9 and 10 below. It is, however, the case that the augment entails non-modal meaning, as its presence on a verb regularly renders inaccessible the directive, futurate, and gnomic readings that are available to the corresponding injunctive. This is an important difference from Homeric, where the augment does not mark indicative mood, as the Aorist and Imperfect are functionally indicative even in the absence of the augment.

8.2 Further differences between the use of the augment in Homer and the *R̥gveda*

It remains only to note a couple of peculiarities of the use of the augment in the *R̥gveda* that differ from Homeric usage. First, in the *R̥gveda* the gnomic interpretation is typically available to the Aorist or Present injunctive, not the (augmented) Aorist or Imperfect indicative. This is in stark contrast to Homer, where the gnomic Aorist virtually requires the augment (cf. §§3.2 and 4.3 above). The details of this mismatch are complex and beyond the scope of the current study, but I have explained how these two apparently contradictory grammars may have arisen from a common source in Hollenbaugh 2020b, to which I refer the reader for further information.

In overview, however, the augment in Homer is favored on the gnomic Aorist due (as it seems) to its marking of “actual occurrence” (Wackernagel 1926–8 [2009]:233).¹¹⁷ Gnomic and similes are viewed as universal, timeless truths or realities about the world, so the augment is applied in such cases to signal this. In Vedic, where the augment has come to be reinterpreted as an indicative marker, the gnomic use is instead treated as one of the modal interpretations of the injunctive,¹¹⁸ which may be Aorist or Present, and the modal uses of the Aorist (directive and gnomic) are regularly ruled out by the augment. In Homer, unlike Vedic, the augment does not mark indicative mood: All augmentless Aorists and Imperfects (except fossilized imperative and present forms) are regularly non-modal and past referring, so the presence or absence of the augment is strictly irrelevant to modality and time reference. Instead, Greek preserves the original adverbial (“evidential”) function of the augment (Delfs 2006:7),¹¹⁹ to mark “certainty” or “actual occurrence” (cf. above §3.2). Because the injunctive is no longer regularly associated with modal interpretations in Greek, it is not typically used in gnomic sentences. The augmented Imperfect, meanwhile, is never so used, since (unlike the Aorist) it has a present-referring counterpart that is morphologically specified, namely the Present indicative (regu-

117. [D]as Augment hier ein Zeichen nicht der Vergangenheit, sondern der *Wirklichkeit* war (Wackernagel 1920:181, my emphasis).

118. On habituality as modal see §2.5 above.

119. “The original evidential function is preserved in the gnomic aorist of ancient Greek.”

larly used in gnomic sentences). Only a handful of archaisms show augmentless Aorists and Imperfects in gnomic function in Greek, attesting to the inherited usage (see §§3.2, 4.3, and 5.4 above).

Second, as mentioned above, the Imperfect in the *R̥gveda* regularly has the augment. In *RV* II, for instance, out of 124 past-referring Imperfect and Present injunctives (terminative and imperfective), 104 are augmented (i.e., Imperfect indicative, 84%), while only 20 are not augmented (i.e., Present injunctive, 16%), a proportion of 5.2 to 1. The Imperfect is thus robustly augmented in the *R̥gveda*. This is again in stark contrast to the situation in Homer, where the Imperfect is securely augmented only about 24% of the time in the epics overall and about 34% of the time (11 out of 32) in *Iliad* 1 excluding speech tags (cf. above §3.2, item x., and §§4.2 and 5.3, item 7.).

This difference between Homer and the *R̥gveda* can be explained along the same lines as the regular augmentation of the Aorist in its “perfect-like” functions discussed above. Because the augmentless forms in *R̥gvedic Sanskrit* could have modal interpretations, the augment could be applied in order to disambiguate the interpretation of the verb, restricting it to just its indicative values. As I mentioned above, the injunctives are only seriously ambiguous from the point-of-view of the present moment, where modal interpretations are accessible. But the Present stem, unlike the Aorist, has a morphological exponent of present tense (viz. the Present indicative). Therefore the injunctive forms of the Present stem have their modal interpretations in contrast to the Present indicative. If the speaker wishes to avoid confusion with modal interpretations in the present moment, the Present indicative is available to restrict it to just its indicative meanings. Because the Present indicative serves this disambiguating role in the present time, the augment is free to be used on the Present stem when it has non-modal *past* reference.

The augment in past contexts is not strictly required, of course, as we have the Present injunctive in past terminative uses some 16% of the time, which run no serious risk of being mistaken for the modal or gnomic injunctive provided the right context (e.g., sequential narration). Still, the risk of confusion is never zero when the injunctive is used, as it formally leaves open all the modal and non-past readings. And because the augment has no reason to be associated with the present-referring indicative interpretations, as it does for the Aorist, the speaker may

eliminate ambiguity from the Present stem altogether by applying the augment to form the Imperfect indicative. The Imperfect indicative is guaranteed to have indicative interpretation by virtue of the fact that it is not the injunctive (or a marked modal form), and it is guaranteed to have past reference by virtue of the fact that it is not the Present indicative. If a speaker intends modal or presential meaning, the augmented Imperfect is thus the worst possible choice, and therefore the best choice for referring to eventualities in the indicative past.

Note that this level of disambiguation is impossible for the Aorist. If the augment is used, the reading may be “perfect like” or (much less often) past terminative; if the augment is not used, the reading may be modal, gnomic, performative, past terminative, or even “perfect-like.” The use of the augmentless forms of the Aorist for non-recent past is thus a kind of compromise: The augmentless Aorist in non-recent past contexts does not strictly rule out modal (directive and gnomic) interpretations but is at a relatively low risk of actually being confused for these interpretations, provided that the past context is properly established in the discourse. The augment is thus of far better service eliminating potential confusion with modal interpretations (directive and gnomic) where context is not as helpful in restricting accessible alternatives, namely contexts of present reference, where the use of the augment ensures that only the (non-modal) “perfect-like” interpretations are available. For this reason, if the augment is used on the Aorist in non-recent past contexts (such as sequential narration) the speaker does not actually succeed in eliminating ambiguity. On the contrary, because of the (independently established) association of the augment with the “perfect-like” interpretations of the Aorist, using the augment in non-recent past contexts means that the verb runs the risk of being misunderstood as “perfect-like” rather than past terminative. This is why the augment is actively avoided in non-recent past contexts when the Aorist is used.

By contrast, the Imperfect, which runs no such risk of confusion with non-past interpretations thanks to the existence of the Present indicative, is capable of achieving total disambiguation of its past indicative expression by employing the augment. Since there is typically no reason to be needlessly vague when one can be clear,¹²⁰ speakers opt for the augmented Imper-

120. Cf. Grice’s (1975) maxim of manner: Be perspicuous – avoid obscurity of expression; avoid ambiguity; be brief (avoid unnecessary prolixity); be orderly.

fect rather than the Present injunctive in the vast majority of its occurrences in past-referring contexts.

Exceptions to these generalizations show that discourse could render particular interpretations sufficiently clear even in the absence of the augment (see Kiparsky 2005 for discussion). Yet in the *Ṛgveda* we must also remember that the poets often *are* being deliberately vague. Obscuring the time reference of a verb to refer with one form to both the mythic past and the ritual present is well within the *Ṛgvedic* poet's wheelhouse, as shown in (80a), and at times the poet even uses sandhi to make it impossible to tell whether the verb is augmented or not, as in (80b).

(80) DELIBERATE TEMPORAL VAGUENESS IN THE *ṚGVEDA*

- a. *nū ca purā ca sādanaṃ rayīṇāṃ jātāsya ca jāyamānasya ca kṣām
satās ca gopām bhāvataś ca bhūr devā agniṃ **dhārayan**_[INJ.] draviṇodām* (RV I.96.7).

‘Both now and before the seat of riches, the ground of what has been born and is being born, the herdsman of what is and of much coming into being—Agni, the wealth-giver, **do/did** the gods **uphold**’_[INJ.] (tr. adapted from Jamison & Brereton 2014:235).

- b. *imāṃ vidhānto apām sadhāsthe dvi**tād**adhur*_[PE.? INJ.? IND.?] *bhṛgavo vikṣv āyóḥ* (RV II.4.2ab).

‘This one here—having done honor (to him) in the seat of the waters—once again the Bhṛgus **(have) installed/install**_[PE.? INJ.? IND.?] among the clans of Āyu.’ (tr. adapted from Jamison & Brereton 2014:406).

Thinking again of the relative lack of augmentation of the Imperfect in Homeric Greek, we can make sense of this by following the same reasoning as that given above for the Aorist. Because in Homer the augmentless forms are not meaningfully distinct from the augmented in the sense that they do not typically have modal or gnomic interpretation, there is no real threat to the recoverability of the past indicative meaning of the Imperfect even in the absence of the augment, as there are no viable alternative interpretations available to it in any case. This means that the augment provides no significant assistance to the addressee in interpreting the Imperfect (in contrast to the situation in Vedic). Because there is no need to use superfluous

morphological material,¹²¹ the Imperfect generally lacks the augment in Homer. The same is true of the Aorist in its past terminative uses, where the augment is strictly unnecessary and so typically avoided. Yet the use of the augment is motivated wherever certainty is at issue, as with the gnomic, futurate, and “perfect-like”¹²² interpretations of the Aorist (see Hollenbaugh 2020b for details and cf. §3.2 above, items i.–iii.).

I summarize the R̥gvedic and Homeric the distribution of the augment and injunctive relative to temporal and modal usage in Tables 8.1 and 8.2.

TABLE 8.1: Distribution of the augment in Vedic and Homeric (summary)

| | VEDIC | | HOMERIC | |
|------------------|------------------------|----------------------------|----------------------------|----------------------------|
| | Pres. inj./Ip̥f. ind. | Aor. inj./ind. | Ip̥f.ind. | Aor. ind. |
| past terminative | aug. robust (5.2:1) | aug. disfavored (1:1.7) | aug. disfavored (1:1.9) | aug. disfavored (1:1.6) |
| “perfect-like” | * | aug. robust (6.6:1) | * | aug. favored (1.5:1) |
| gnomic/pres.hab. | aug. irregular | no aug. | * | aug. regular |
| modal/directive | no aug. | no aug. | — | — |

* Usage perhaps attested but not typical (cf. n.116 above).

In Table 8.1, I provide approximate proportions of augmentation to non-augmentation for relevant categories. Augmentation is classed as favored/disfavored, robust, or regular/irregular. The labels *favored/disfavored* are used when the augment is clearly preferred/dispreferred for a particular form in a particular use, but there is still a significant number of cases where the augment is absent/present. The augment is said to be *robust* when there are proportionally very few cases of the augmentless form in a particular use (i.e., the augmented forms outnumber the augmentless by a magnitude of 3 or more). The labels *regular/irregular* are used when the augment is practically always applied/avoided for a particular form in a particular use, but there are

121. Cf. Grice’s (1975) maxim of quantity: Make your contribution as informative as is required for the current purposes of the exchange; do not make your contribution more informative than is required.

122. A typological parallel to the “perfect-like” uses of the augmented Aorist is the use of the particle *qad* in Arabic, which when combined with the Perfective has an affirmative function (meaning ‘really’ vel sim.) and often has “perfect-like” interpretations (resultative or experiential). This construction typically resists negation (Bahloul 1996:41), which is reminiscent of the Homeric tendency not to negate augmented verbs (see item ix. in §3.2 above). Similarly, compare Arab. *lam yaqul* ‘he did not say’, an archaism in Arabic in which a form that is synchronically modal (*yaqul* ‘he may say, etc.’) is preserved in its original, non-modal function under the negator *lam* (Al-Jallad 2018:317), rather than the indicative form used elsewhere *yaqūlu*.

some exceptions. When the augment is strictly impossible in a particular use, I write “no aug.” Cells with an *em*-dash mean that the form in question cannot be used in the function indicated, irrespective of augmentation. Of course, the indicative can be used in modal functions in Greek and Sanskrit at all linguistic stages (e.g., when the modal particle ᾄν/ἔν is used in Greek), but this is not what is meant by *modal* here. Rather, *modal* refers to the present- or future-referring modality with which the Vedic injunctive is compatible but is more typically expressed in Sanskrit and Greek by the marked modals: subjunctive (including simple future meaning), optative (potential, deontic, etc.), or imperative (directive, including prohibitive). This usage of the injunctive in Vedic is wholly unknown to later Sanskrit (apart from the prohibitive construction) and to Greek of all periods. I assume that already in Homer the inherited Aorist and Present injunctives had undergone a functional merger with their augmented counterparts such that the augmentless forms may only express indicative mood and are treated synchronically as Aorist and Imperfect indicatives.

TABLE 8.2: Regular temporal and modal usage in Vedic and Homeric (summary)

| ↓ uses | VEDIC | | HOMERIC | | VEDIC & HOMERIC | |
|-----------------------------|-----------|------|-------------|---------|-----------------|--------------|
| | aug. | inj. | aug. | no aug. | Pres. ind. | marked moods |
| presential (prog.-cont.) | [Aor.?) | ✓ | ✓ | * | ✓ | |
| “perfect-like” | ✓ | • | ✓ | • | (✓) | |
| past (term./ipfv.) | • | ✓ | • | ✓ | * | |
| gnomic/pres.-hab. | * | ✓ | ✓ | * | ✓ | (✓) |
| futurate | [post-RV] | ✓ | ✓ | * | (✓) | ✓ |
| pfmtv.-rptv. | [Aor.?) | ✓ | [post-Hmc.] | [Myc.?) | ✓ | (✓) |
| modal (directive) | | ✓ | | | | ✓ |

- ✓ Usage typical of a particular form.
• Usage not irregular but not preferred.
* Usage perhaps attested but not typical (cf. n.116 above).
(✓) Usage available with additional nuance or under particular syntactic restrictions.
Empty cell: Usage regularly unavailable to form (unattested or non-productive).

In Table 8.2 I summarize range of temporal and modal expression as it relates to augmentation in Ṛgvedic and Homeric. Here, the Aorist and Imperfect indicative are treated together, as are the Aorist and Present injunctive. Whereas the previous table was meant to show the

distribution of the augment, this table is meant to give a sense of the functional range of the augmented vs. augmentless forms in each language, in addition to showing where the two languages agree in regards to the usage of these forms. For convenience I group the present-referring continuous-state interpretation with the progressive under the heading “presential,” while “perfect-like” here includes only the resultative, experiential, and universal uses. I also include an overview of the usage of the Present indicative and marked moods (subjunctive, optative, imperative) in the final two columns, with respect to which the two languages are essentially in agreement.

From this it can be easily seen that Ṛgvedic and Homeric are by no means in exact agreement as to what sorts of functions correlate with the use or avoidance of the augment on the Aorist and Imperfect. The only place where the two are not in disagreement is in using the augment for “perfect-like” readings (Aorist only) and avoiding it for past terminative (Aorist or Imperfect/Present injunctive) and past imperfective (Imperfect/Present injunctive) readings. The two languages disagree as regards augmentation for presential, gnomic, and futurate interpretations,¹²³ as Ṛgvedic uses the Present or Aorist injunctive to express these meanings while Homeric only regularly uses the augmented Aorist. Further, the augmentless forms in Homer cannot have directive modal force as the injunctive often has in the *Ṛgveda*, except for forms that are synchronically imperatives of the type δός ‘give!’ The performative-reportive use is not attested in Homer, so the matter of its augmentation is inconclusive.

Despite their differences, the *RV* resembles Homer in that the augment does not mark temporal or aspectual meanings but rather increases the salience of certain readings independently available to the verbal base itself. Thus, however infrequently, the injunctive Aorist can have “perfect-like” readings, even as the injunctive Present is compatible with past terminative interpretations. The only entailment of the augment in the *Ṛgveda* seems to be indicative mood, since the augmented forms are necessarily non-modal (directive and gnomic). If the augment originated as an adverbial element specifying certainty, as suggested in Hollenbaugh 2020b, its reinterpretation as a marker of indicative mood in Vedic is intuitively plausible, standing in

123. Note, however, that these readings do not apply to the Imperfect indicative in either language.

paradigmatic contrast to the modal uses of the injunctive forms (directive and gnomic).¹²⁴

124. For a typological parallel cf. Lebanese Arabic, in which an indicative marker *b-* has evolved from an old progressive marker (Cohen 1984:294). Thus, the marked form *b-yišrab* means ‘he drinks’, while the unmarked *yišrab* means ‘may he drink’ (*vel sim.*).

CHAPTER 9

Aorist indicative and Aorist injunctive

Having established that the augment is not responsible for temporal or aspectual marking in Vedic, I now turn to an examination of the verbal bases themselves and the various shades of temporal and aspectual expression with which each is compatible. As in my treatment of the Homeric data, I will look at the augmented and augmentless forms of the Aorist and Imperfect/Present injunctive, beginning with the Aorist. I will first enumerate the uses of the Aorist, citing examples and frequencies of occurrence (§§9.1–9.4), then generalize over these uses to determine its functional range (§9.5). I then assign a denotation to the Aorist that accounts for its observed functional range (§9.6).

Table 9.1 summarizes the functional range of the Aorist injunctive and indicative (column 1, bolded for clarity) as compared with the Present injunctive/Imperfect indicative and Perfect indicative/injunctive/Pluperfect. See the beginning of Section 4 for an explanation of the notations used. I introduce the “+” sign here after the labels in curly braces that indicate the predicate types compatible with particular readings. Those labels marked “+” indicate only the predicate types for which I have evidence as attesting that use, though it seems likely that more data would produce examples built to other types of predicates. So, for instance, all examples of the universal use of the Perfect known to me are built to activity predicates (see row 6, column 3), but it is possible that this is simply an accident of my relatively limited data and that more actionality types may be attested.

TABLE 9.1: Readings of the R̥gvedic Aor. inj./ind., Pres. inj./Ipf., and Pf. ind./inj./Plpf.

| AOR. INJ./IND. | PRES. INJ./IPE. | PF. IND./INJ./PLPF. |
|--------------------------------|----------------------------------|---------------------------------------------------------|
| 1. [w/ primary ending?] | progressive-conative {events} | <i>intensive-frequentative?</i> (rare) {activities+} |

| | | | |
|-----|-------------------------------------------------|---------------------------------------------|-------------------------------------------------|
| 2. | stative {states} | (past/pres.) continuous state {states} | stative {states} |
| 3. | resultative (recent and non) {events} | <i>resultative</i> (rare) {transfm.} | <u>resultative</u> (recent and non) {events} |
| 4. | experiential {events+} | <u>experiential</u> ? (rare) {events} | experiential {any} |
| 5. | counter-sequential {transfm.} | <i>counter-sequential</i> {transfm.} | <i>counter-sequential</i> {transfm.} |
| 6. | present universal {any} | present universal (rare) {non-transfm.+} | universal (rare) {activities+} |
| 7. | concentrative-sequential {events} | concentrative-sequential {any} | <u>concentrative-sequential</u> {events} |
| 8. | X | complexive {non-transfm.} | complexive {activities+} |
| 9. | inceptive {non-transfm.} | <i>inceptive</i> {non-transfm.} | (Pf. inj.), (Plpf.?) {activities+} |
| 10. | performative-reportive {any} | <u>reportive</u> {events} | × |
| 11. | [exp. only] {activities+} | past pluractional/hab. {events} | (Plpf.?) {events} |
| 12. | gnomic {any} | <u>gnomic</u> {events+} | <u>gnomic-empiric</u> {any} |
| 13. | futurate {events} | <u>futurate</u> {achiev.+} | <u>futurate</u> ? {states+} |
| 14. | modal/directive {any} | <u>modal/directive</u> {any} | (Pf. inj.) {any} |

For the first two columns, readings should be assumed to be available to either the indicative or the injunctive forms except where indicated in the following way: If the reading is only available to the indicative, the label is italicized; if it is only available to the injunctive, the label is underlined (exceptions mentioned in n.116 above are not considered in the table). These generalizations are again based on what I have evidence for, and some are liable to be falsified in light of more data.

The nature of the evidence makes it difficult to say anything certain about the Perfect injunctive and Pluperfect, as E. Dahl (2010:372–3, 407) notes well (see further Jamison 2014:155, 158–60). For this reason, the unmarked assumption for the third column (Perfect indicative/injunctive/Pluperfect) in Tables 9.1 and 10.1 is that the reading in question is securely attested for the Perfect indicative only, which is indicated in the tables by plain, unaffected text. Where I have evidence that both the Perfect indicative and the Pluperfect are compatible with a reading, I put the usage label in italics (NB: this differs from the practice of the first two columns). Where both the Perfect indicative and the Perfect injunctive are attested for a particular reading, I underline the usage label (NB: this differs from the practice of the first two columns). Where only the Pluperfect has a particular reading, I write “(Plpf.),” as I did for the Homeric data. Where only the injunctive is used, I write “(Pf. inj.).” Where evidence can be ad-

duced in support of all three forms being compatible with a particular reading, I italicize and underline the usage label.

The label “performative-reportive” in row 10 is used where where Tables 4.1 and 5.1 had “egressive,” since there are no clear egressive uses known to me in the *Ṛgveda*, but the injunctive forms are often used in performative or reportive functions (the Present injunctive is only used in the reportive sense). These are considered terminative in the sense that eventuality time is included in assertion time ($t_E \subseteq t_A$). In row 11, the pluractional uses are meant not to include the gnomic uses, which are considered in row 12 and are typically pluractional as well. Row 11 thus refers only to the *past* pluractional uses of the Present injunctive/Imperfect (imperfective) and the experiential pluractional uses of the Aorist indicative (no other kind is, to my knowledge, securely attested).

The label “modal/directive” in row 14 is used where where Tables 4.1 and 5.1 had “past CF,” since the latter is not a relevant usage in the *Ṛgvedic* data. More relevant are the modal interpretations of the injunctives (apart from the gnomic), which come in three varieties. The first is “subjunctive-like,” which is the same as futurate, since the subjunctive in the *Ṛgveda* marks future time, and is counted in row 13. The second is “optative-like,” whereby the injunctive is used in a directive sense conveying the will of the speaker of the type ‘may/would that so-and-so do such-and-such’. The third is “imperative-like,” whereby the injunctive is used in a directive sense with the force of a command of the type ‘do such-and-such!’ or ‘let so-and-so do such-and-such’. Negative commands are conveyed with the prohibitive construction, which consists of the negator *mā* ‘don’t’ and the injunctive. Since the gnomic and subjunctive-like uses are considered in rows 12 and 13, the term *modal/directive* as used in Tables 9.1 and 9.1 refers only to the directive uses of the injunctive, whether optative, imperative, or prohibitive. In general, however, I use the word *modal* to refer to the directive, futurate, and gnomic uses together (i.e., rows 12 through 14).

On the use of the label “gnomic-empiric” in the third column see Section 11 below, which also discusses the other readings in the third column of Tables 9.1 and 10.1.

I will proceed with discussion of the first column in the same manner as for the Home-

ric Aorist, grouping the readings into “perfect-like” (rows 2–6), terminative (rows 7–10), and pluractional–modal (rows 11–14). At the end is appended a brief discussion of a morphological curiosity: the Aorist with primary endings, which might in some cases have present progressive interpretations (row 1).

9.1 “Perfect-like” readings of the Aorist: Examples & frequency

In what follows I discuss each reading of the Aorist as it pertains to the *Ṛgveda*, with examples of each and a summary of their frequency in my corpus (*RV* II). For theoretical background concerning “perfect-like” readings see Section 2.3 above.

2. STATIVE AORIST: As in Homer, when the Aorist is built to state predicates it may have a present stative interpretation, such that the state referred to by the predicate is asserted to hold at speech time. The use is, however, even rarer in the *Ṛgveda* than it is in Homer. Of the augmented Aorist, Delbrück (1897:239) cites *ābhāiṣma* ‘we fear’ in (81a) (cf. similarly *ābhaiṣuḥ* at *RV* VIII.48.11b). In this example, the imperative *āpa tād uchatu* ‘let (dawn) dawn it away’ implies that the speakers’ fear of their bad dream is ongoing, such that it needs to be driven away by the dawn. Of the Aorist injunctive *ūpa sthād* ‘stands by, is standing by’ is quotable, in (81b).

(81) STATIVE AORIST IN THE *ṚGVEDA*: INDICATIVE (a) AND INJUNCTIVE (b)

a. *ūṣo yāsmād duṣvāpniyād ābhaiṣma āpa tād uchatu* (*RV* VIII.47.18cd).

‘O Dawn, the bad dream which we **are afraid of**, let (dawn) dawn it away’ (tr. adapted from Jamison & Brereton 2014:1128).¹²⁵

b. *vānaspātir avasrjānn ūpa sthād* (*RV* II.3.10a).

‘The Lord of the Forest [=sacrificial post] **stands by** [i.e., is standing, is in position] on releasing (the victim)’ (tr. Jamison & Brereton 2014:406, second interpolation mine).

There are no examples of this kind in *RV* II other than (81b), which is not securely inter-

125. Jamison & Brereton (2014:1128) translate *ābhaiṣma* as ‘we have feared’, though Prof. Jamison (p.c.) now prefers ‘we have come to fear’. If read in this way, of course, this is not a stative use of the Aorist indicative but rather a resultative and inceptive one.

preted.¹²⁶

3. RESULTATIVE AORIST: The Vedic Aorist is often said to refer to events of the recent past (i.e., the “hot news” perfect reading).¹²⁷ But in fact the Aorist in its resultative sense may refer to events that are recent or remote with respect to speech/evaluation time, provided that the result state still holds at speech/evaluation time. It is true that the recent resultative use is many times more common than the remote (see below), yet the remote resultative seems to be attested reasonably clearly, and the Aorist must therefore be regarded as compatible with it. I attribute the scarcity of the non-recent resultative use to the fact that this use is typically carried out by the Perfect, which thus blocks the application of the Aorist in non-recent resultative contexts (cf. §11 below). Examples of recent and remote resultative Aorist indicatives are given in (82). For further discussion and examples of remote-past resultative uses of the Aorist see Hoffmann 1967:154–6 (under the label “Konstatierung,” ‘constative, statement of fact’).

(82) RESULTATIVE AORIST INDICATIVE: RECENT (a) AND REMOTE (b)

- a. *sámiddho agnir níhitaḥ prthivyām pratyāñ víśvāni bhúvanāni **asthāt*** (RV II.3.1b).

‘Agni, kindled, deposited on the earth, **has stood up** facing all beings’ (tr. Jamison & Brereton 2014:405).

- b. *yó dāsaṃ várṇam ádharaṃ gúhā **ákaḥ*** (RV II.12.4b).

‘(he) who **has made** the Dāsa tribe subjugated and hidden away’ (tr. Jamison & Brereton 2014:416).¹²⁸

The Aorist injunctive may also be resultative, whether recent or remote, as shown in (83).

126. Alternative readings include resultative ‘has come to stand, taken position’ or perhaps ‘stands/steps toward, reverently approaches’ (cf. *úpa + devān* ‘to the gods’ in other Āpī hymns involving the ‘Lord of the Forest’, as at RV I.142.11ab). But given that the ‘Lord of the Forest’ is identified as a sacrificial post, which presumably is stationary, the present stative interpretation seems to me most likely.

127. For examples, discussion, and further references see E. Dahl 2010:264–9 and cf. n.111 above.

128. Cf. similarly RV I.179.2, II.12.4c, and X.95.2ab (the first and third of these are discussed by Hoffmann (1967:155–6)).

(83) RESULTATIVE AORIST INJUNCTIVE: RECENT (a) AND REMOTE (b)

- a. *múhur á yúvā bhūt* (RV II.4.5d).

‘(he who) in an instant **has become** young’ (tr. Jamison & Brereton 2014:407).¹²⁹

- b. *yáḥ kármabhir mahádbhiḥ súśruto bhūt* (RV III.36.1d).

‘he who **has become** well famed through great deeds’ (tr. Jamison & Brereton 2014:518).

In RV II there are 137 total Aorists indicative and injunctive, of which 91 are securely interpreted.¹³⁰ Of these, 47 have a resultative reading (34%), 40 securely interpreted (44%). 40 of the resultative Aorists are indicative (85%), of which 32 are securely augmented (80%) and 27 of those are securely interpreted (84%); 7 are injunctive (15%), all of which are securely augmentless and securely interpreted. These 40 resultative Aorists account for 75% of all indicative Aorists in RV II (53 in all), 71% of those that are securely augmented (32 out of 45), and 79% of those that are securely interpreted (27 out of 34). The 7 resultative injunctives account for just 8% of the injunctives in RV II (84 in all), 9% of those that are securely augmentless (7 out of 79), and 14% of those that are securely interpreted (7 out of 51). The resultative use accounts for about 89% (47 out of 53) of all the “perfect-like” uses of the Aorist taken together, 91% of those that are securely interpreted (40 out of 44), and 88% (43 out of 49) of present-referring “perfect-like” uses (i.e., excluding the counter-sequential cases), 90% of those that are securely interpreted (37 out of 41).

Taking the injunctive and indicative together, but looking only at those with indicative-like uses (i.e., leaving aside the gnomic, modal, and performative-reportive uses), we may say that there are 73 “indicative” Aorists in RV II (53% of the total Aorists), 53 of which are securely interpreted (58%). The resultative use of the Aorist indicative/injunctive accounts for 64% of all indicative Aorists (47 out of 73), 75% of those that are securely interpreted (40 out of 53). Among indicative Aorists overall in RV II the ratio of injunctives to indicatives is 1:2.5 (21 to

129. Cf. similarly RV II.2.7d, 4.1c, 4.8b, 11.18d.

130. On the notions of secure interpretations and metrically assured augmentation see Section 1.5 above. The relatively low confidence in interpretation (66% of Aorists are securely interpreted) is due to the difficulty of the text and obscurity of much of its context. There are also several cases where the form cannot be determined with much certainty (Aorist vs. Present vs. Perfect, injunctive vs. subjunctive, etc.).

52). The proportion of augmentation among resultative Aorists is much higher, around 1:5.7 (7 to 40). The resultative Aorist injunctive accounts for 33% of injunctive Aorists that are used indicatively (7 out of 21), 35% of those that are securely augmentless (7 out of 20), and 54% of those that are securely interpreted and securely augmentless (7 out of 13).

Of the 47 resultative Aorists (40 securely interpreted), 41 are recent past (87%), 37 securely interpreted (93%); 6 are remote past (13%), 3 securely interpreted (8%). 36 of the recent-past resultatives are augmented (88%), 28 securely so (76%), and 4 of the remote-past resultatives are augmented (67%), all secure (11%). 4 of the resultative uses are counter-sequential (9%), 3 securely interpreted (8%), of which 2 are securely augmented and 2 are securely injunctive. This leaves 43 present-referring resultative Aorists (91%), 37 securely interpreted (93%), of which 95% are recent-past resultatives (41 out of 43), all securely interpreted, 5% are remote-past resultatives (2 out of 43), not securely interpreted (cf. 82b above). Of the present-referring (non-counter-sequential) resultative Aorists, 38 are augmented (88%), 30 securely so (81%), and 5 are injunctive (12%), all secure (14%).

In sum, we may observe that resultative is the most common use of the Aorist and is by a considerable margin its most common indicative use, accounting for 56% of all indicative Aorists (its closest competitor is the concentrative use at 20%). As expected, the vast majority of the resultative Aorists are augmented, but it is noteworthy that the 2 present-referring examples that are non-recent, as well as 2 of the counter-sequential cases, are securely augmented. This suggests that, though the augment correlates with the resultative use of the Aorist, present reference is not a necessary condition for its use. Conversely, the occurrence of injunctive Aorists in resultative functions suggests that neither present reference nor resultative interpretation is a sufficient condition for the use of the augment. The resultative use was thus inherently compatible with the Aorist itself and not an endowment of the augment or a feature of which the augment is the realization. The denotation of the Aorist must therefore be suited to a robust resultative usage.

4. EXPERIENTIAL AORIST: The most typical way to express experiential perfect meaning in the *R̥gveda* is with the Perfect indicative, on which see Section 11 below. Nonetheless, the Aorist

has experiential as a use 4 times in *RV* II (3%), 3 securely interpreted (3%), none of which are counter-sequential (i.e., all are present referring) and all are securely augmented. These account for about 8% of all present-referring uses of the Aorist in *RV* II (4 out of 49), 7% of those that are securely interpreted (3 out of 41). I provide examples of the experiential Aorist indicative in (84).

(84) EXPERIENTIAL AORIST INDICATIVE

- a. *tuvám pāyúr dāme yás te ávidhat* (*RV* II.1.7d).

‘You are a protector in the house of him who **has done** you **honor**’ (tr. Jamison & Brereton 2014:402).¹³¹

- b. *yám u pūrvam áhuve tám idám huve* (*RV* II.37.2a).

‘Which one I **have invoked** previously, him I invoke here and now’ (tr. mine).

Though all examples in *RV* II are securely augmented, there are at least a few reasonably clear cases of experiential Aorist injunctives in the *R̥gveda*, as shown in (85).¹³²

(85) EXPERIENTIAL AORIST INJUNCTIVE

- a. *agnír hí devā́m am̐to duvasyāti áthā dhármāṇi sanátā ná dūduṣat* (*RV* III.3.1cd).

‘Since immortal Agni befriends the gods, therefore, from of old, he **has never corrupted** the foundations (of the sacrifice)’ (tr. Jamison & Brereton 2014:471).

- b. *áyajvanah̐ sākṣi víśvasmīn bhāre* (*RV* X.49.1d).

‘I **have vanquished** the non-sacrificers in every contest’ (tr. Jamison & Brereton 2014:1456).

- c. *prá-pra vayám am̐taṃ jātávedasam priyám mitráṃ ná śamsiṣam* (*RV* VI.48.1cd).

‘[W]e—that is, I—**have proclaimed** time after time the immortal Jātavedas, dear like an ally’ (tr. Jamison & Brereton 2014:839).

Interestingly, all of the experiential Aorists, with or without augment, appear to be pluractional, though the ones with overt quantificational adverbials are all injunctive (cf. above §5.4, items 11. and 12., on the lack of augmentation among pluractional and habitual Imperfects in

131. Similarly *ávidhat* ‘has done honor’ at *RV* II.1.9c and II.26.4a.

132. Cf. also Hoffmann’s (1967:167–8) notion of an ‘attributive’ or ‘characteristic’ use of the injunctive (“Beeigenschaftung”), though he describes this as being derived from the meaning of the injunctive itself and not of the Aorist in particular (citing Present injunctive examples as well).

Iliad 1). For further discussion and examples of experiential uses of the Aorist see Hoffmann 1967:154–6 (under the label “Konstatierung,” ‘constative, statement of fact’).

5. COUNTER-SEQUENTIAL AORIST: The Aorist is the regular means of expressing counter-sequentiality in the *R̥gveda* with a finite verb (cf. Delbrück 1888:578–9; Hoffmann 1967:157–9; E. Dahl 2010:275–8, 326–8; Hollenbaugh 2018:20–1).¹³³ The counter-sequential use of the Aorist is exemplified in (86).

(86) COUNTER-SEQUENTIAL AORIST: INDICATIVE (a) AND INJUNCTIVE (b)

- a. *ūrdhvó hí ásthād*_[AOR.IND.] *ádhi antárikṣe ádhā vrtrāya prá vadhám jabhāra*_[PF.IND.]
*míhaṃ vásāna úpa hím ádudrot*_[PLPF.] *tigmāyudho ajayac*_[IPF.] *chátrum índraḥ* (*RV*
 II.30.3).

‘Since he **had taken** his **stand**_[AOR.IND.], erect, in the midspace. Then he bore down_[PF.IND.] his murderous weapon toward Vrtra.

since, clothing himself in mist, he [=Vrtra] had run up_[PLPF.] to him, having sharp weapons Indra conquered_[IPF.] his rival.’ (tr. adapted from Jamison & Brereton 2014:445, after Jamison 2015–:ad loc.).¹³⁴

- b. *ádhvaryavo yó dṛbhīkaṃ jaghána yó gá udājad ápa hí valám váḥ*
tásmā etám (*RV* II.14.3a–c).

‘Adhvaryus! Who struck Dṛbhīka and who drove up the cattle—for he **had opened** the cave—to him (bring) this (soma)’ (tr. Jamison & Brereton 2014:420).

As can be seen, both indicative and injunctive Aorists are attested in this function (on the injunctive in particular see E. Dahl 2010:326–8 and Hoffmann 1967:158–9). The counter-sequential Aorists in *RV* II are evenly split between the indicative and the injunctive, occurring 2 times apiece. Though the augmented Aorist tends to get the most attention in the handbooks concerning counter-sequentiality, it does not seem that the injunctive is especially disfavored in this function in the *RV* overall, as injunctive examples are quotable from throughout the text:

133. Non-finite forms are commoner overall in this function, most especially gerunds (e.g., in (116a) below) and, to a lesser extent, participles.

134. Cf. similarly, though less securely, *RV* II.34.2cd.

whether in temporal *yád*-clauses (e.g., II.20.8c, V.32.1cd, X.115.1c), causal *hí*-clauses (e.g., in addition to (86b), RV X.44.5a), or main clauses (e.g., RV IV.16.8b, despite Hoffmann 1967:211, given the adverb *pūrvyām* ‘before, previously’).

The counter-sequential use accounts for 9% of resultative uses of the Aorist in RV II (4 out of 47), 8% of the “perfect-like” uses of the Aorist taken together (4 out of 53), and 3% of the occurrences of the Aorist overall (4 out of 137). 2 of the 4 are securely augmented, and 2 are securely injunctive. The 2 injunctives account for 29% of all resultative injunctives in RV II (2 out of 7), 4% of the “perfect-like” uses taken together (2 out of 53), 10% of all indicational injunctives (2 out of 21), and 2% of injunctives overall (2 out of 84). The 2 indicatives account for 5% of all resultative injunctives in RV II (2 out of 40), 4% of the “perfect-like” uses taken together (2 out of 53), 4% of all augmented Aorists (2 out of 53), and 4% of indicatives overall (2 out of 53).

6. UNIVERSAL AORIST: The Ṛgvedic Aorist may occasionally have a universal perfect interpretation with present reference (compare the possible Homeric uses in §4.1 above). On this use of the Aorist see Delbrück 1897:279; Hoffmann 1967:156–7; E. Dahl 2010:289–90; Hollenbaugh 2018:20. Only 1 Aorist in RV II has this reading (0.7%), which is securely interpreted (1%) and securely augmented (given in (87b) below). The universal interpretation thus accounts for just 2% of the present-referring “perfect-like” uses of the Aorist in RV II (out of 49 total, 41 securely interpreted).

I provide examples of the universal Aorist indicative in (87).¹³⁵

(87) UNIVERSAL AORIST INDICATIVE IN VEDIC

- a. *jyóg evá dīrghám táma āsayiṣṭhāh* (RV X.124.1d).

‘For a long time indeed you **have lain** [i.e., **been lying**] in long darkness.’ (tr. Jamison & Brereton 2014:1601, interpolation mine).

- b. *jyóg abhūvann ánudhūpitāso hatvī tēsām ā bharā no vásūni* (RV II.30.10cd).

‘For a long time they **have been** [being/getting] “besmoked” [=befuddled]. Having

135. Cf. similarly RV I.33.15d and X.124.4a, though E. Dahl’s (2010:289–90) interpretation of these as universal is far from certain, as in these cases the event could be interpreted as having terminated before evaluation time and not extending throughout the assertion time interval.

smashed them, bring their goods to us here' (tr. Jamison & Brereton 2014:445, first interpolation mine).

- c. *āhāni gṛdhrāḥ páry ā va āgu imāṃ dhīyaṃ vārkāryāṃ ca devīm* (RV I.88.4ab).

'For days, (like) vultures they **have been wheeling around** this insight for you, and around the goddess "Water-Maker" [=penis = *vīṇā*]' (tr. Jamison & Brereton 2014:220).

- d. *jyóg vā iyám urváṣī manuṣyèṣv avātsīt* (ŚB XI.5.1.2).

'For a long time (until now) truly this Urvaṣī **has lived/been living** among the people'.¹³⁶

In (87b), I take the Aor. *ābhūvan* to mean that the subject has been moving at intervals toward befuddlement for some time, thus in effect 'they have been getting more and more bewildered for a long time now' (cf. Hoffmann 1967:157). (87d) comes from *Śatapatha Brāhmaṇa* (ŚB, Vedic prose) but is included here as an especially clear illustration of the universal interpretation.

I am aware of no instances of the injunctive Aorist with a universal interpretation (the word *jyók* 'for a long time (now)' does not occur with the Aorist injunctive in its non-modal uses in the *Ṛgveda*).

COMBINED TOTALS FOR "PERFECT-LIKE" READINGS: The Aorist has "perfect-like" uses 53 times in RV II (39%), 44 securely interpreted (48%). Of these, 45 are augmented (85%), 37 securely so (84%), and 8 are injunctive (15%), all secure (18%). The "perfect-like" uses account for 53 out of 73 (73%) indicatival Aorists in RV II (i.e., excluding the modal, gnomic, and performative-reportive uses of the injunctive). Among augmented Aorists, the "perfect-like" uses account for 85% (45 out of 53) of those in RV II and 91% of those that are securely augmented and securely interpreted (31 out of 34). Among injunctive Aorists, the "perfect-like" uses account for 10% (8 out of 84) of those in RV II and 14% of those that are securely augmentless and securely interpreted (7 out of 51). Of the indicatival uses of the injunctive Aorist, the "perfect-like" uses account for 38% (8 out of 21) and 54% of those that are securely augmentless and securely interpreted (7 out of 13).

136. Following Hoffmann's (1967:156) translation: "lange hat (bis jetzt) diese Urvaṣī bei den Menschen gewohnt."

We may generalize that the “perfect-like” uses are the most common of the uses of the Aorist in the *Ṛgveda* (39%). The nearest competitors are the directive uses (28%) and past terminative uses (14%). The “perfect-like” uses are particularly characteristic of the indicative Aorist, accounting for 85% of all its uses (45 out of 53). The nearest competitor is past terminative (concentrative and inceptive) at 13% (7 out of 53). By contrast, the “perfect-like” uses are not very characteristic of the injunctive Aorist, accounting for just 10% of all its uses (8 out of 84) or 38% of its indicatival uses (8 out of 21). Much more frequent are (collectively) its directive (46%), gnomic (17%), and past terminative (14%), and performative-reportive (12%) uses. Of the indicatival Aorist injunctives, the past terminative uses (i.e., excluding performative-reportive) are more frequent than the “perfect-like” uses, making up 57% of all indicatival injunctives (12 out of 21).

It can thus be seen that the augment confines the Aorist to just its indicatival uses, and particularly favors—but does not require—the “perfect-like” interpretations. As explained in Section 8 above, this is because the injunctive is at its vaguest when the reference time is to the present, as it is only in such cases that the modal, gnomic, and performative-reportive interpretations are possible (none of these are available from the perspective of past time reference). To rule these alternative interpretations out and restrict the interpretations to indicative, the augment is applied. Given that the reference time is present, the only indicatival interpretations available to the Aorist in such cases are the “perfect-like” ones (all the others have past time reference). Thus the augment correlates strongly with the “perfect-like” interpretations and present time reference of the Aorist, without actually *marking* perfect aspect or present time reference themselves.

The injunctive, on the other hand, leaves open the modal interpretations (directive and gnomic) and is accordingly mostly used for those functions. In its indicatival functions it has no strong association with resultative interpretation, as its augmented counterpart does. Accordingly, insofar as it is used indicatively, the injunctive Aorist is mostly past in reference (concentrative or inceptive), since such interpretations are most easily recoverable when the augment is lacking, as the speaker thereby avoids implying a “perfect-like” value that the augmented form would have (due to its independently established association with such readings,

as described in the preceding paragraph). Because there are no reasonable alternative interpretations, such as the modal or gnomic uses, available to the injunctive from the perspective of the past, the lack of augment in past-time contexts leaves no serious room for confusion as to what is meant, so where indicative the meaning of the injunctive is past in reference (concentrative or inceptive). This is the reason for “the tendency” of “augmentless forms in historical sense...to obliterate the distinction of imperfect and aorist” noticed by Avery (1885:330). Because the Aorist most typically applies in “historical” contexts (e.g., past narration) without the augment, where only past terminative interpretations are accessible, the distinction between it and the Imperfect/Present injunctive in such contexts cannot help but be neutralized. Thus the Aorist appears to lose its distinctive character in precisely these contexts, simply because it is precisely in these contexts that its functional range overlaps with that of the Imperfect/Present injunctive. If it looks like the lack of augmentation is responsible for this neutralization, that is only because the augment is disfavored on the Aorist in its past terminative uses for the reasons just described.

Exceptions to these generalizations, wherein the augmented forms have past terminative uses and the injunctive forms have “perfect-like” uses, only show that the tendencies just described are the result of pragmatic reasoning (or conventionalized implicatures) and not semantic entailments. Nonetheless, the exceptions make clear that the meaning of the Aorist must be compatible with both the “perfect-like” and the past terminative readings, independent of augmentation.

9.2 Terminative readings of the Aorist: Examples & frequency

For theoretical background concerning terminative readings see Section 2.4 above.

7. CONCENTRATIVE-SEQUENTIAL AORIST: The Aorist is the least common means of sequencing events in past narration (past concentrative-sequential) or of referring to a single isolated event in the remote past (past concentrative). Far more common in these functions are the Imperfect/Present injunctive (113 times in *RV* II) and the Perfect indicative/injunctive (35 times in *RV*

II). The concentrative-sequential Aorist indicative/injunctive, by contrast, occurs only 17 times in *RV* II, 8 securely interpreted. Of the 164 verbs with concentrative interpretations in *RV* II, just over 10% are represented by the Aorist, whereas the Imperfect accounts for 68% and the Perfect for 21%. As mentioned above, this would be odd indeed for a form that simply denotes perfective aspect, particularly if its competitors represented functional categories less well suited to concentrative-sequential interpretation than itself, such as perfect, imperfective, or simple past grams, as the Perfect and Imperfect have been variously described in the literature. I will take up this issue in more detail in Sections 9.5 and 9.6 below. For now I will simply survey the Aorist in its concentrative-sequential uses.

In (88a), the Aorist indicative *ní astah* ‘laid low’ occurs in sequential narration in a passage describing a series of events located in the mythic past, as can be clearly seen from the concentrative Imperfect and Present injunctive that follow it.¹³⁷ A similar succession of mythic events can be observed in (88b), where the Aorist injunctive *vidád* ‘found’ is used. Again the Aorist is found in conjunction with an Imperfect and a Present injunctive—the functional categories most characteristic of sequential narration in the *R̥gveda*.¹³⁸

(88) CONCENTRATIVE-SEQUENTIAL AORIST: INDICATIVE (a) AND INJUNCTIVE (b)

- a. *asyá suvānāsya mandīnas tritāsya ny árbudaṃ vāvṛdhānó astah*_[AOR.INJ.]
*āvartayat*_[IPE.] *sūryo ná cakrám bhinád*_[PRES.INJ.] *valám índro āṅgirasvān* (*RV*
 II.11.20).

‘Having grown strong on this, Trita’s exhilarating (soma) that was being pressed, he **laid low**_[AOR.INJ.] Arbuda.

He rolled_[IPE.] (Namuci’s head) like the sun its wheel. Together with the Aṅgirasas, Indra split_[PRES.INJ.] the Vala cave’ (tr. Jamison & Brereton 2014:415).

- b. *ājanayat*_[IPE.] *sūriyaṃ vidád*_[AOR.INJ.] *gá aktúnā áhnām vayúnāni sādhat*_[PRES.INJ.] (*RV*
 II.19.3cd).

‘He gave birth_[IPE.] to the sun and **found**_[AOR.INJ.] the cattle. He perfected_[PRES.INJ.] the patterns of the days through the night’ (tr. Jamison & Brereton 2014:428).

137. Cf. similarly *RV* II.15.4b, 21.5d; less securely II.9.1b, 11.8b, 15.8b, and 19.6d.

138. Cf. similarly *RV* II.20.5d, 20.6b, 20.8a, 20.8d; less securely II.4.3b, 11.8a, 17.2c, 19.4c, 40.2a.

For further examples and discussion of the concentrative-sequential use of the Aorist indicative see E. Dahl 2010:272–4; for the Aorist injunctive in this function see *ibid.*:325–6.

The concentrative use of the Aorist occurs 17 times in *RV II* (12%), 8 securely interpreted (9%). 10 are injunctive (59%), 5 of which are securely interpreted (63%), and 7 are augmented (41%), 3 of which are securely interpreted (38%). These account for 23% of the indicatival uses of the Aorist indicative/injunctive (17 out of 73), 15% of those that are securely interpreted (8 out of 53). The injunctive is thus somewhat more common in this function than the indicative, accounting for 14% of all indicatival Aorists (10 out of 73), while the augmented forms account for 10% (7 out of 73).

Among indicatives, the concentrative use accounts for 13% of the total (7 out of 53), 16% of those that are securely augmented (7 out of 45), and 9% of those that are securely interpreted and securely augmented (3 out of 34). Nearly all of the indicative Aorist's terminative uses are concentrative (7 out of 8 or 88%), there being just one possible exception if correctly read as performative rather than resultative (see item 10. below). Among injunctives, the concentrative use accounts for 12% of the total (10 out of 84), 13% of those that are securely augmentless (10 out of 79), and 10% of those that are securely interpreted and securely augmentless (5 out of 51).

It thus appears that the indicative and injunctive Aorists are proportionally about equally as common in the concentrative use. However, looking only at the indicatival uses of the Aorist injunctive, we find that 48% are concentrative (10 out of 21), 38% of those that are securely interpreted and securely augmentless (5 out of 13). This is considerable when compared to the indicative, which is concentrative just 13% of the time (7 out of 53). The correlation of lack of augmentation with past concentrative meaning is significant ($p = 0.0042$, Fisher's exact test). Thus, insofar as the injunctive has non-modal interpretations, it is most commonly interpreted as past concentrative.

Though the data for *RV II* is limited, the tendency for past-referring Aorists to be augmentless is in fact robust, as becomes clear from a survey of injunctive usage in the entire *RV* conducted by Avery (1885). From this it emerges that the most common indicatival interpretation of

the augmentless forms is “preterital,” which is equivalent to what is here called past terminative (mostly concentrative-sequential). According to Avery (1885:361), the occurrences of past terminative uses of the Aorist injunctive in the *Ṛgveda* (567) outnumber its “perfect-like” (92) and even its gnomic uses (368). The past terminative uses are surpassed only by the (non-gnomic) modal uses taken together (1,009): directive (491), prohibitive (316), and futurate (202). If these figures are correct—or at least not wildly inaccurate, as we have no reason to believe they are (cf. Avery’s (1885:329–30) discussion of this issue)—then past terminative is the single most frequent use of the Aorist injunctive in the *Ṛgveda*, accounting for 28% of injunctive Aorists overall (567 out of 2,036) and 86% of the indicatival uses of the injunctive Aorists (567 out of 659). The “perfect-like” uses of the injunctive Aorist, by contrast, account for just 5% of its uses overall (92 out of 2,036) and 14% of its indicatival uses (92 out of 659)—figures which are roughly in line with those given for *RV* II in Section 9.1 above. For discussion of the motivation for augmentless forms of the Aorist to be preferred to the augmented in sequential narrative contexts see Sections 8 and 9.1 above.

8. [COMPLEXIVE AORIST:] There are to my knowledge no clear cases in the *Ṛgveda* of the Aorist used in past complexive function such that eventuality time and assertion time are coextensive ($t_E = t_A$). See E. Dahl 2010:289–93 on this possibility, though in my view all of his examples are best understood as either past concentrative or “perfect-like.” Though some of the verbs he quotes represent events that last for some duration in the past, such as *asrot* ‘listened’ at *RV* VII.33.5c, the eventuality time interval—however long it may be—is nonetheless fully contained within the assertion time, and there are no clearly complexive examples of the type ‘did such-and-such for five days’.

9. INCEPTIVE AORIST: The terminative inceptive use of the Aorist is fairly marginal in the *Ṛgveda*, there being only two such uses in *RV* II, both of which are injunctive, and only 1 is securely interpreted. These account for 1% of all Aorists in *RV* II, 2% of all injunctives (out of 84), 3% of all indicatival Aorists (out of 73), and 10% of indicatival injunctives (out of 21). On this use of the Aorist injunctive see E. Dahl 2010:328–30. I provide an example in (89).¹³⁹ Here, the inceptive

139. Cf. similarly *RV* II.24.14d.

interpretation of the verbs *prāti sthāt* ‘stood firm’ and *vī acaṣṭa* (saw clearly) is naturally assured by the fact that their subjects belong to groups of people that are physically incapable of the action of the verb. For the predicate SEE to be truly applied to a person who is blind, it can only be in the meaning that the person was blind up to some point but then *started* being able to see, and hence the interpretation of the IpF. *vī acaṣṭa* is inceptive. Likewise, a person incapable of walking or standing can, if the predicate STAND is to be truly applied to them, only be said to have *started* standing, so the Aor. inj. *prāti sthāt* is also inceptive.

(89) PAST TERMINATIVE INCEPTIVE AORIST INJUNCTIVE (AND IMPERFECT)

*prāti śronā sthād*_[AOR.INJ.] *vī anāg acaṣṭa*_[IPF.] (RV II.15.7c).

‘The lame one **stood firm**_[AOR.INJ.] [i.e., began standing]; the blind one saw clearly_[IPF.] [i.e., started seeing]’ (tr. adapted from Jamison & Brereton 2014:422).

The augmented Aorist can also have inceptive interpretations, but all such cases known to me are inceptives of resultative readings. On such uses of the Aorist indicative see E. Dahl 2010:293–6, Hoffmann 1967:157–8, fn.102, and Delbrück 1897:239–40.¹⁴⁰ There are two such occurrences in RV II, both securely interpreted, accounting for 5% of resultative Aorist indicatives (out of 40), 7% of those that are securely augmented and interpreted (out of 27). There is also 1 injunctive in this function (present-referring inceptive resultative), which accounts for 14% of resultative injunctives in RV II (securely interpreted). An example of the inceptive resultative Aorist indicative is given in (90). Here, *āpāyi* is the first word of the hymn and so is likely to have an inceptive interpretation, corresponding to the initiation of the soma-pressing.

(90) INCEPTIVE RESULTATIVE AORIST INDICATIVE

*āpāyi*_[AOR.IND.] *asya āndhaso mādāya mánīṣiṇaḥ suvānāsya prāyasah* (RV II.19.1ab).

‘**The drinking** of this plant for exhilaration **has begun**_[AOR.IND.] [lit. ‘has begun to be drunk’], o men of inspired thought, (the drinking) of the delightful soma-pressing’ (tr. Jamison & Brereton 2014:428, interpolation mine).¹⁴¹

140. Hoffmann (1967:157–8, fn.102) notes that most inceptive Aorists in the *Rgveda* are sibilant Aorists—examples like (89) and (90) notwithstanding. This is true also of the Greek inceptive (Smyth 1956:430; Rijksbaron 2002:20–1) and complexive (Jacobssohn 1933:310) uses of the Aorist indicative.

141. Cf. similarly RV II.3.1b.

There is additionally one performative Aorist indicative in *RV* II which seems to have an inceptive value, namely *úpa...asṛkṣi* at II.35.1a (see (92) below), if it means ‘I (hereby) pour out, begin to pour out’. This is treated under the next item (10.). The performative Aorist injunctive is probably used in this way as well, such as *prá yakṣi* ‘I begin the sacrifice’ at *RV* X.4.1a (cf. VI.16.8–9). Note that both of these examples are in the first pādas of their hymns, a context favorable to inceptive and performative-reportive interpretations, since the ritual participants often begin a sacrifice at the commencement of the hymn by performing some action (including the recitation itself).

Finally, it may be mentioned that the gnomic and directive modal uses of the Aorist injunctive *might* sometimes have an inceptive value as well. E. Dahl (2010:328–31) quotes such a possibility from Maṇḍala II, namely *rāṇiṣṭana* ‘take pleasure!’ (II.36.3b). However, this is, in my view, better regarded as an imperative (but see his discussion on pp.330–1), and in any case his treatment of it as an “atelic predicate” meaning ‘be happy’ seems to me dubious, since the root $\sqrt{ran^i}$ could equally well be taken to mean basically ‘take pleasure’ and thus be understood as a “telic” predicate (so Whitney 1885:135). His other quoted examples are preterital (past terminative), though he mentions two other “possible examples” of inceptive Aorist injunctives, both of which *could* be read as gnomic-habitual. The first is *RV* VI.26.1d, with *dāḥ* ‘you give’, but given that this form is regularly directive, an imperative ‘give!’ seems like the better interpretation here (so Jamison & Brereton 2014:800) rather than gnomic. In any case, this verb is not “atelic,” and it is unclear how it could be interpreted as inceptive. The second is *RV* VII.25.4d, with *ná mardhīḥ* ‘you do not neglect’, though this phrase has complications of its own, on which see Hoffmann 1967:101. However one takes it, it does not seem to mean ‘(you) do not start neglecting’ (vel sim.). I therefore tentatively conclude that there are no good examples of gnomic or directive Aorists with an inceptive nuance, and the inceptive interpretation is thus confined to the terminative, resultative, and (perhaps) performative uses of the Aorist.

COMBINED TOTALS FOR PAST TERMINATIVE READINGS: I include here a summary of the two types of past terminative uses of the Aorist attested in *RV* II. This is effectively the same as for the concentrative given above, except that it adds 2 to the counts for the injunctive Aorist (viz. its

two past inceptive uses). I will therefore not repeat the figures for the indicative in detail, but only enough for easy comparison of the relative frequencies of the injunctive with the indicative in their past terminative uses (concentrative + inceptive).

The past terminative uses of the Aorist occur 19 times in *RV II* (14%), 9 securely interpreted (10%). 12 are injunctive (63%), 6 of which are securely interpreted (67%), and 7 are augmented (37%), 3 of which are securely interpreted (33%). These account for 26% of the indicatival uses of the Aorist indicative/injunctive (19 out of 73), 17% of those that are securely interpreted (9 out of 53). The injunctive is thus more common in past terminative functions than the indicative, accounting for 16% of all indicatival Aorists (12 out of 73), while the augmented forms account for 10% (7 out of 73).

Among injunctives, the terminative uses account for 14% of the total (12 out of 84), 15% of those that are securely augmentless (12 out of 79), and 12% of those that are securely interpreted and securely augmentless (6 out of 51). Looking only at the indicatival uses of the Aorist injunctive, we find that 57% are terminative (12 out of 21), 46% of those that are securely interpreted and securely augmentless (6 out of 13). The past terminative uses of the injunctive are thus proportionally more frequent than those of the indicative, which is terminative just 13% of the time (7 out of 53). The correlation between lack of augmentation and interpretation as past terminative is significant ($p = 0.0002$, Fisher's exact test). Thus, insofar as the injunctive has non-modal interpretations, it is most commonly interpreted as past terminative.

10. PERFORMATIVE-REPORTIVE AORIST: By “performative” and “reportive” I mean the following:

- **PERFORMATIVE**: A performative sentence is one of the type *I now pronounce you legally wed* or *The court hereby sentences you to five years*.
 - The speech act itself imposes some change on the state of the world.
 - These are typically first person (mostly singular, mostly active), though other persons are possible.
 - Performatives are regularly expressed in the *R̥gveda* by the Aorist injunctive (type

prá vocam ‘I (hereby) proclaim’ (e.g., RV I.32.1a))¹⁴² or the Present indicative (type *yunájmi* ‘I (hereby) hitch up’ (RV I.82.6a)),¹⁴³ or the subjunctive,¹⁴⁴ though there are also some plausible examples of performative *indicative* Aorists as well (see E. Dahl 2010:296–8; Schwyzler & Debrunner 1950:282).¹⁴⁵

- REPORTIVE: A reportive sentence is one of the type often used in stage directions or by sportscasters, of the type *She shoots, she scores!*
 - These do not necessarily impose a change on the world but rather report events as they happen in the present moment (i.e., the very recent past).
 - They are typically third person, sometimes second.

142. Examples of performative-reportive injunctive Aorists (cf. E. Dahl 2010:332 and Hoffmann 1967:251–5, 269): RV I.25.18ab (*dárśam* (*nú*) ‘(now) I see’), 32.1a (*nú...prá vocam* ‘now I proclaim’), 59.6 (*prá nú...vocam* ‘I now proclaim’), 61.2a (*prá yamsi* ‘I hold out’), 136.6b (*vocam* ‘I proclaim’), 141.1a (*dhāyi* ‘is installed’), 150.1a (*voce* ‘I call myself’), 154.1a (*nú kam...prá vocam* ‘right now I proclaim’), 187.1a (*nú stoṣam* ‘now I praise’) II.4.1a (*huvé* ‘I call (upon)’), 4.6b (*svānīt* ‘sounds’), ?5.3b (*vōcad* ‘speaks’), 15.1ab (*prá...nú...vocam* ‘I now proclaim’), 18.3a (*nú kam...yojam* ‘right now I (shall?) yoke’), 21.3d (*vocam prá* ‘I proclaim’), 27.2b (*adyá...juṣanta* ‘today...enjoy, ?are enjoying’), 29.1d (*huve* ‘I call (to)’), 37.2a (*huve* ‘I invoke’), 38.9d (*huvé* ‘I call (upon)’), III.1.20b (*prá...vocam* ‘I (shall?) proclaim’), 53.2b (*nú...yakṣi* ‘now I sacrifice’), ?IV.7.1a (*dhāyi* ‘is/?has been installed’), V.25.1b (*āchā...gāsi* ‘here I sing’), ?31.6a (*prá...vocam* ‘I (shall) proclaim’), ?41.13b (*ā...vocam* ‘I (shall) call upon’), 70.1c (*vāmsi* ‘I win’), 85.5b (*prá vocam* ‘I proclaim’), VI.8.1b (*prá nú vocam* ‘I now proclaim’), 16.8a (?*prá...yakṣi* ‘I(?) begin the sacrifice’), 32.1d (*takṣam* ‘I fashion’; contrast the summarizing perfect *evā...takṣuḥ* ‘have thus fashioned’ at II.19.8b), ?48.16b (*śamsiṣam nú* ‘I (shall) announce now’), 51.3d (*āchā voce* ‘I call here’), VII.15.4ab (*nú...jījanam* ‘now I give birth’), 33.1c (*voce pári* ‘I speak about’), 98.5a (*prá...vocam* ‘I proclaim’), VIII.24.1a (*ā śiṣāmahi* ‘we direct’), 27.2 (*ā...gāsi* ‘here I sing’), 45.28c (*prá śamsiṣam* ‘I laud’), 101.15c (*prá nú vocam* ‘I now proclaim’), IX.92.1b (*pári...sarji* ‘is sent around’), 102.1c (*pári bhuvat* ‘encompasses’), ?105.4c (*ādhi...dīdharam* ‘I fix, ?have fixed’), X.4.1a (*prá...yakṣi* ‘I begin the sacrifice’), ?52.5a (*ā...yakṣi* ‘I (shall?) gain through sacrifice’), 69.5d (*prá nú vocam* ‘I now proclaim’), 85.25b (*subaddhām...karam* ‘I (hereby) make her well bound’ (cf. *ibid.*:252 on this example), 96.1a (*prá...śamsiṣam* ‘I proclaim’), 112.8ab (*prá nūnām...vocam* ‘I (shall?) now proclaim’). Possibly also *tām idām huve* ‘I invoke here and now’ (e.g., RV II.37.2a in (84b) above), if this is an injunctive Aorist and not an indicative Present.)

143. Cf. similarly RV II.33.12c, 35.12cd, VIII.27.1c, X.4.1a, 85.25a. See E. Dahl 2010:168–71 for discussion and further examples.

144. Though these cases may perhaps be better understood as referring to the impending future (cf. Hoffmann 1967:249–51). They are particularly common in the first person plural, as in *nú ṣṭavāma...utā carkirāma* ‘now we shall praise and pay tribute to’ (RV IV.39.1ab), or first person singular, as in *stāvā* (*nú*)/*stavāma* ‘I/we shall praise (now)’ (RV II.11.6); *prá nú vocā* ‘I shall now proclaim’ (RV VI.59.1a); *śāmsā* ‘I shall praise’ (RV VII.61.4a); *nú...stoṣāni* ‘now I shall praise’ (RV X.88.3ab). The subjunctive might also show reportive use in the third person, as in *nūnām...dhāti* ‘now he distributes’ (RV II.38.1c, but see §9.4 below) (cf. Whitney 1889:§836a). The optative can be used semi-performatively as well, as in *mántram vocema* ‘We would speak this spell’ (RV II.35.2b; cf. 12b).

145. These are: *astoṣi* ‘I (hereby) praise’ (RV I.122.1c, VIII.39.1a, X.77.1d; recent-past/resultative at V.41.10a; cf. Aor. inj. *nú stoṣam* ‘now I praise’ (I.187.1a)) and *úpa...asṛkṣi* ‘I (hereby) pour out (my speech)’ (RV II.35.1a; s-Aorist injunctive not attested, except with *mā* in the *Atharvaveda*).

- They are regularly expressed in the *Ṛgveda* by the Present injunctive (type *nūnām sṛjat* ‘now he discharges’ (RV VII.104.20d)),¹⁴⁶ the Present indicative (cf. n.143 above), or sometimes the Aorist injunctive.

Following E. Dahl (2010:297), I take the performative-reportive reading to presuppose the co-extension of eventuality time and speech time ($t_E = t_S$), as well as the inclusion of eventuality time within assertion time ($t_E \subseteq t_A$). This is meant to capture the intuition that, in performative sentences, the truth of the eventuality is dependent on the speech act itself and is therefore co-extensive with it (e.g., the event of pronouncing a couple legally wed necessarily lasts exactly as long as the pronouncement itself). For reportives, the reverse situation yields a similar effect: The fact of an event, as it comes about, in succession with other events, is what motivates each reportive speech act, such that the speech acts are roughly coextensive with the events themselves. For instance, in the *She shoots, she scores!* example, the event of shooting prompts the speaker to utter “She shoots” and the event of scoring “she scores,” such that the events and speech acts are typically perceived—for all practical purposes—as being coterminous. Thus, the performative-reportive uses belong technically to the terminative readings ($t_E \subseteq t_A$).

On the performative interpretation of the Aorist injunctive in the *Ṛgveda* see Hoffmann 1967:251–5, 269 (“Koinzidenzfall”) and E. Dahl 2010:332; for the much rarer perfromative reading of the Aorist indicative see E. Dahl 2010:296–8. On performatives and reportives in general see Austin 1962 (origin of the term *performative* to describe this kind of speech act); Ö. Dahl 1985:71–72, 81, 83, 206; Fortuin 2019:25–26; and cf. Lloyd 1999 and Bary 2012 with reference to the performative-reportive uses of the Aorist in Greek.

As just noted, the performative interpretation is regularly expressed by the Aorist injunctive rather than the indicative, most often at the openings of hymns (i.e., in the first verse or verses), and most commonly built to verbs of speaking, praising, singing, or making (hymns). I provide

146. Possible examples of the Present injunctive in reportive or progressive sense: RV I.71.1a (*úpa prá jinvan* ‘stimulate’), 173.1ab (*gāyat* ‘he sings, is singing’, *ārcāma* ‘we chant, are chanting’), II.13.2b (*prá bharanta* ‘are bringing forth, ?bring forth’), 35.13a (*?janayat tāsū* ‘begets in these (waters)’), VI.5.3a (*pradīvaḥ sīdaḥ* ‘you have long since been sitting’), VII.1.1ab (*janayanta* ‘give birth to’), 3.2a (*próthat* ‘snorts, ?has snorted’), 42.1 (*prá nakṣanta... prá navanta* ‘are reaching forth... are bellowing forth’), 104.20d (*nūnām sṛjat* ‘now discharges, ?is discharging, ?will discharge’), X.92.1d (*aśāyata* ‘(hereby) reaches’), 172.1b (*sacanta* ‘follow, are following’), 176.1b (*prá navanta* ‘bellow out’).

an example in (91).

(91) PERFORMATIVE AORIST INJUNCTIVE

*ápūrvīyā purutāmāni asmai mahé vīrāya tavāse turāya
virapśīne vajrīṇe śāmtamāni vácāṃsi āśā sthāvīrāya takṣam* (RV VI.32.1).

‘For him I **fashion** with my mouth these words, unprecedented, best of many, most wealful— for the great hero, powerful and precipitous, conferring abundance, bearing the mace, stalwart’ (tr. adapted from Jamison & Brereton 2014:816).¹⁴⁷

The Aorist indicative in this use is extremely rare, but one does happen to occur in RV II, as shown in (92).

(92) PERFORMATIVE AORIST INDICATIVE

úpa im asrkṣi vājayúr vacasyāṃ cáno dadhīta nādyó gíro me (RV II.35.1ab).

‘I, seeking prizes, (hereby) **(begin to) pour** it **out**, my eloquence. The offspring of the rivers should take delight in my hymns’ (tr. adapted from Jamison & Brereton 2014:452).

Possible reportive Aorist injunctives are found in RV II at 4.6b, 5.3b, and 27.2b. The last of these, *juṣanta* ‘they (hereby?) enjoy’, is parallel to Pres. ind. *juhomi* ‘I (hereby) pour’ in the first verse, which is likely performative, thus increasing the likelihood that *juṣanta* is to be interpreted as reportive. The first two are respectively *ráthiyeva svānīt* ‘He sounds/makes a sound like chariot (wheels)’ and in *vócad bráhmāṇi vér u tát* ‘He speaks(?) the formulations and pursues(?) this (priestly office)’ (cf. (111) below). In the last example, the Aor. inj. *vócat* ‘speaks’ calls to mind the 1sg. *vócam*, which, as noted above, regularly has a performative interpretation ‘I (hereby) proclaim’ throughout the *Ṛgveda*. When put in the third person, this naturally lends itself to a reportive interpretation ‘he (hereby) speaks’. Further, *vócat* here occurs alongside the Pres. inj. *vélḥ* ‘pursues’. Since the Present injunctive is regularly found in a reportive use, the Aorist conjoined with it is all the likelier to share this interpretation. Yet this passage is beset with difficulties that make the readings of either of these verbs far from certain (see Jamison’s (2015–) online *Ṛgveda* commentary on this verse for discussion and cf. n.172 below), and in fact none of the performative or reportive Aorists in RV II can be read with complete confidence.

147. Contrast the resultative augmented Aorist that comes at the end of hymns, once their “fashioning” has been completed, as *átakṣan* ‘they have fashioned’ at RV II.31.7b.

Nonetheless, the existence of the reading is assured on the basis of many other likely examples throughout the *Ṛgveda*, as cited and discussed in the handbooks referred to above.

There are up to 11 performative-reportive Aorists in *RV II* (8% of all Aorists), though none are securely interpreted. 10 of the 11 are securely injunctive (91%), 1 is securely augmented (9%). 8 are performative (73%) and 3 are reportive (27%). All 3 of the reportive Aorists are securely injunctive. 7 of the 8 performatives are securely injunctive (88%), 1 is securely augmented (13%). Looking at the injunctives alone, the performative-reportive uses account for 12% of all Aorist injunctives in *RV II*.

It is difficult to know how to classify the performative-reportive use, whether with the modal uses or with the indicational uses. From a formal point-of-view, the very fact that the Aorist lacks an augment in the performative-reportive uses suggests alignment with the modal functions (directive and gnomic). The performative in particular seems not to behave like a simple declarative sentence, in that it involves an imposition of the speaker's will on the world and is in that sense "modal." Yet it also involves the declaration of an eventuality that is necessarily true by the very act of the declaration itself, so it is in that sense "indicational." The reportive is perhaps more clearly indicational, being something like a narrative present and thus perhaps similar in kind to the past terminative uses of the injunctive (cf. Kiparsky 1968:37–41 on the injunctive as the equivalent of a narrative present in past narration in Vedic and Greek). Yet the attestation of the reportive use is so scanty and uncertain that it is difficult to be sure of its assignment to one group or another.

To get around this difficulty, I have chosen to treat the performative-reportive use in isolation (so too with the Present and Perfect stems), trusting that the omission of such a small data set from either group will not upset the findings here presented to a significant degree. By way of comparison, we may look at how much of each group the performative-reportive uses would take up if included therein: Taken together with the modal (directive and gnomic) uses of the Aorist (64 in all), the performative-reportive Aorist accounts for up to 17% of this group in *RV II* (11 out of 64). Taken together with the indicational uses of the Aorist (84 in all), the performative-reportive Aorist accounts for 13% of this group (11 out of 84). Looking at the injunctives alone, the performative-reportive uses would account for 16% of the modal uses of

the Aorist injunctive (10 out of 63) or 35% of its indicatival uses (11 out of 31). In any case, the performative-reportive uses make up a relatively small portion of the larger groups with which it might be considered.

Given that the performative-reportive interpretation is terminative in the sense that eventuality time is included in assertion time ($t_E \subseteq t_A$), it may be informative to give a summary of the frequency of occurrence of the performative-reportive Aorist within the terminative group. Taken together, there are 30 terminative Aorists in *RV II* (22% of the total), 9 securely interpreted (9%). Of these, 8 are augmented (27%), all secure, and 22 are injunctive (73%), 21 securely so. The performative-reportive uses make up 37% of all terminative uses of the Aorist (11 out of 30), 13% of its augmented terminative uses (1 out of 8), and 45% of its injunctive terminative uses (10 out of 22).

The clear tendency for the performative-reportive Aorists to be injunctive is understandable in light of what has been said above in relation to the augment being used to rule out modal uses (directive and gnomic) when the reference time is present. Given the robust tendency to use the augment for indicatival, “perfect-like” interpretations, if a speaker chooses *not* to use the augment in a context of present reference, this will immediately signal to the addressee that a special, non-“perfect-like” meaning is intended. So, for instance, when a speaker uses Aor. inj. *prá vocam* ‘I proclaim’ in a context of present reference, the addressee reasons that, if the speaker had meant ‘I have proclaimed’ they would have used the form most strongly associated with that meaning, namely Aor. ind. *prá avocam*. Therefore, the addressee concludes, something else must be intended instead. In such a case, there are various interpretive options available to the injunctive: directive, gnomic, futurate. The directive use is practically ruled out by the fact that most of the performative Aorists are first person singular (see n.142 above). Context and predicate type disfavor a gnomic interpretation in performative sentences, since these sentences are not describing characteristic actions of some other person but the current actions of the speaker or addressee and typically involve verbs of speaking, praising, singing, or making (hymns) that tend to be associated with performative usage. The distinction between the futurate and performative interpretations of verbs of this kind is naturally minimal (compare ‘I shall now proclaim’ vs. ‘I hereby proclaim’), but given that speakers do sometimes use the sub-

junctive in performative-like contexts (cf. n.144 above), it seems that the difference was actually made, and an addressee could therefore safely reason that, if the speaker had meant ‘I shall proclaim’ then the speaker would have used the subjunctive. All this reasoning (i.e., the speaker’s awareness of the addressee’s expectations, and the addressee’s awareness of what forms the speaker could have used but chose not to) conspires to help the addressee adjudicate between semantic alternatives and home in on a specific interpretation of a particular form, built to a particular kind of predicate, in a particular context. This is why the augment is not typically used in performative sentences in Vedic: Given the present reference time, the speaker must avoid confusion with the “perfect-like” interpretations of the Aorist; meanwhile, context and predicate type can be relied on to exclude other theoretically possible interpretations that the injunctive might have.¹⁴⁸

An example of the contrastive use of the injunctive and indicative Aorists in performative-reportive and resultative functions respectively within a single hymn is given in (93). In (93a), which opens the hymn, the Aor. inj. *dhāyi* has a performative sense ‘(Agni) is (hereby) installed’ (i.e., by the ritual participants). In (93b), which concludes the hymn, the Aor. ind. *ástāvi* has a summarizing effect concerning what has now been accomplished in the hymn: ‘(Agni) has been praised’.

(93) CONTRASTIVE INJUNCTIVE (a) AND INDICATIVE (b) AORIST IN A SINGLE HYMN

- a. *bāl itthā tād vāpuṣe dhāyi*_[AOR.INJ.] *darśatām devāsya bhārgaḥ sāhaso yāto jāni* (RV I.141.1ab)

‘Yes, indeed! It is just so: the luster of the god, lovely to see, **is (hereby) installed**_[AOR.INJ.] for wonder, after he has been born of strength’ (tr. adapted from Jamison & Brereton 2014:316).

- b. *ástāvy*_[AOR.IND.] *agnīḥ śīmīvadbhir arkaīḥ* (RV I.141.13a).

‘Agni **has been praised**_[AOR.IND.] with our energetic chants [/with his ardent flames]’ (tr. Jamison & Brereton 2014:318).

148. I assume reportive uses of the Aorist injunctive work similarly, though they must rely for their interpretation even more on context than the performative does, since there is no characteristic person/number or type of verb to cue the addressee that the meaning is meant to be reportive. Given the limited and uncertain nature of the evidence, however, this remains largely speculative.

I give an overview of the uses of the Aorist indicative and injunctive in their present-referring functions in Table 9.2.

TABLE 9.2: Performative vs. resultative interpretations of the Aorist

| | | | |
|-------------------|------------------------------------|----------------|--------------------------------------------------|
| <i>prá vocam</i> | ‘I (hereby) proclaim’ (RV I.32.1a) | <i>takṣam</i> | ‘I (hereby) fashion’ (RV VI.32.1d) |
| <i>prá avocam</i> | ‘I have proclaimed’ (RV IV.45.7a) | <i>átakṣan</i> | ‘they have fashioned’ (RV II.31.7b) ^a |

^a Thematic Aorist, not Imperfect (see Narten 1964:124–5).

9.3 Pluractional and modal readings of the Aorist: Examples & frequency

11. [PLURACTIONAL AORIST]: There are no cases in RV II or elsewhere known to me of an Aorist indicative or injunctive with pluractional (iterative or distributive) interpretation and past reference time. The only pluractional cases of indicative Aorists that I am aware of are experiential (see E. Dahl 2010:299–300 for examples), and those of the injunctive are gnomic-habitual (see *ibid.*:332–3 for examples). Such cases are thus subsumed under items 4. (experiential) and 12. (gnomic).

12. GNOMIC AORIST INJUNCTIVE: The gnomic use of the Aorist injunctive is found with some frequency in the *Rgveda* (i.e., more than E. Dahl’s (2010:332–3) “occasionally” lets on). The augmented Aorist is never used in this function, in striking contrast to the gnomic Aorist in Homeric, which is regularly augmented (cf. above §§3.2, 4.3). This difference between the languages has been explained in overview in Section 8.2 above. In Vedic, the gnomic uses of the injunctive arise pragmatically, in contrast to the marked indicative (i.e., augmented) forms of the Aorist (and Imperfect).¹⁴⁹ In a context of present reference, when the augment is not used, the addressee reasons that, if something more specific had been meant, the speaker would have used the augment. Since the speaker has chosen to leave open alternative interpretations, there is an invited inference for the addressee that something other than the indicatival interpretations is meant. Thus, in the absence of the augment, where all interpretations are strictly available, the indicatival (“perfect-like”) interpretations are disfavored, while the modal ones (directive

149. On habituality as modal see §2.5 above.

and gnomic) are more accessible, due to the speech act participants' mutual awareness that an alternative, more specific form was available for use if it had been desired. Unlike the futurate and directive interpretations (on which see below), which are of restricted application among injunctives by virtue of the fact that there exist marked modal forms that are typically preferred in modal functions, the gnomic Aorist injunctive has no morphological competitor.¹⁵⁰ Thus, wherever an Aorist is used in a gnomic context, it will regularly be injunctive.¹⁵¹

The contrast between the indicatival augmented Aorist and the gnomic injunctive Aorist can be seen in (94). The eight injunctives in verses 1–3 (94a) establish what typically happens, and so what should happen today (see Jamison & Brereton's (2014:719) introduction to this hymn). By contrast, the four indicatives in verse 10 of the same hymn (94b) mark today's sunrise as accomplished.

(94) GNOMIC INJUNCTIVE IN CONTRAST TO THE INDICATIVE

- a. *vidā divó viṣiyānn ādrim ukthair āyatiyā uśāso arcīno guh*_[AOR.INJ.]
*āpāvṛta*_[AOR.INJ.] *vrajīnīr út sūvar gād*_[AOR.INJ.] *vī dúro mānuṣīr devā āvah*_[AOR.IND.]
*vī sūriyo amātiṃ ná śríyaṃ sād*_[AOR.INJ.] *ā ūrvād gāvām mātā jānatī gāt*_[AOR.INJ.]
*dhānvarṇaso nadiyaḥ khādoarṇāḥ sthūṇā iva sūmitā dr̥mhata*_[PRES.INJ.] *dyaúḥ*
asmā ukthāya párvatasya gárbho mahínām janúṣe pūrviyāya
*vī párvato jīhīta*_[PRES.INJ.] *sādhata*_[PRES.INJ.] *dyaúr āvívāsanto dasayanta*_[PRES.INJ.]
bhūma (RV V.45.1–3).

‘Through knowledge unloosing the stone of heaven with hymns—the shining (beacons) of the approaching dawn **come**_[AOR.INJ.] (out of it)—

he **uncloses**_[AOR.INJ.] (the doors) to the enclosures: the Sun **comes up**_[AOR.INJ.]. The god has opened up_[AOR.IND.] the doors belonging to the sons of Manu.

The Sun **unlooses**_[AOR.INJ.] his beauty like an ensign; the mother of the cows [=Dawn],

150. The Present injunctive, of course, does have a morphological competitor for the gnomic function (the Present indicative) and for this reason is relatively uncommon in this function compared to the Present indicative (cf. §10 below).

151. The subjunctive sometimes seems to have a gnomic-habitual value, as Hoffmann (1967:115, 238–9) discusses, citing *naśat* ‘reaches’ (RV VII.32.21b, coordinated with a Present indicative) and some others. But such cases are predictably uncommon and often motivated by formal considerations rather than purely functional.

recognizing (the way), **comes here**_[AOR.INJ.] from the pen.

The rivers (of light) have floods (broad and high) like plains, have floods that chew (their banks). Heaven becomes firm_[PRES.INJ.] like a well-fixed pillar.

In response to this hymn here the womb of the mountain (gapes open) for the primordial birth of the great ones [=dawns].

The mountain gapes open_[PRES.INJ.]; heaven achieves success_[PRES.INJ.]; desiring to win the earth, they [=poets/Aṅgirasas] exhaust themselves_[PRES.INJ.]’ (tr. Jamison & Brereton 2014:719).

- b. *ā súriyo aruhac*_[AOR.IND.] *chukráṁ árṇo áyukta*_[AOR.IND.] *yád dharíto vītáprṣṭhāḥ udná ná nāvam anayanta*_[IPF.IND.] *dhírā āśṛṇvatír ápo arvág atisthan*_[IPF.IND.] (RV V.45.10).

‘The Sun **has mounted**_[AOR.IND.] the gleaming flood, now that he **has yoked**_[AOR.IND.] his golden, straight-backed (horses).

Like a boat through the water the wise ones guided_[IPF.IND.] him; the waters, giving heed, stood still_[IPF.IND.] nearby’ (tr. Jamison & Brereton 2014:720).

Thus, as in the case of the performative-reportive uses (cf. (93) above), the interpretation of the injunctive as gnomic depends on an implicit awareness that it is *not* the indicative. Using a form underspecified for tense and mood pragmatically invites alternative, non-indicative interpretations, even if it does not strictly require them.

The gnomic use of the Aorist injunctive is found 14 times in *RV* II (10% of all Aorists), though only 1 is securely interpreted (1% of all securely interpreted Aorists). 11 of these are securely injunctive (79%). The gnomic use thus represents up to 17% of injunctive Aorists in *RV* II (14 out of 84) and 26% of all modal uses of the Aorist injunctive (14 out of 53). Excluding injunctives in the prohibitive construction, the gnomic use accounts for 70% of modal uses (14 out of 20), and is thus the most common non-prohibitive modal use of the injunctive.

13. FUTURATE AORIST: The injunctive may occasionally be used to refer to eventualities located in the future with respect to speech time.¹⁵² This is typically considered to be a modal use of the

152. The augmented Aorist may perhaps attest a futurate interpretation as well, though not in the *R̥gveda*. Del-

injunctive, since it has the same function as the subjunctive, which regularly has future meaning (cf. Hoffmann 1967:236–55 and Kiparsky 2005:222). The subjunctive and injunctive often occur side by side in interrogative sentences (Hoffmann 1967:245–7). I provide an example in (95).

(95) FUTURATE (“SUBJUNCTIVE-LIKE”) AORIST INJUNCTIVE

*utá sváyā tanvā sám vade tát kadā nu āntār vāruṇe bhuvāni*_[AOR.SJV.]

*kīm me havyām āhr̥ṇāno juṣeta*_[AOR.OPT.] *kadā mṛlīkām sumānā **abhī khyam***_[AOR.INJ.] (RV VII.86.2).

‘And together with my own self, I speak this: “When shall I be within_[AOR.SJV.] Varuṇa? Might he take pleasure_[AOR.OPT.] in my offering, becoming free of anger? When **shall** I, with good thoughts, **look upon**_[AOR.INJ.] his mercy?”’ (tr. Jamison & Brereton 2014:991).

The Aorist injunctive is more common in this function than the Present injunctive (cf. Hoffmann 1967:250–4), in part because subjunctives are more commonly built to Presents than to any other stem.¹⁵³ The application of the injunctive in futurate contexts is thus more readily blocked by the marked subjunctive in the Present than in the Aorist. For all Aorist stem classes proper subjunctive forms are generally lacking, and so are much rarer than the injunctives in this function (Whitney 1889:301, 307, 312, 318, 322, 324, 326).

Yet the futurate use is not especially common even among Aorists, due (presumably) to blocking on the part of the marked Aorist subjunctives that do exist, which typically bleed the application of the injunctive in futurate contexts wherever possible. The use of the injunctive in these contexts is motivated by a variety of factors, as Hoffmann (1967:236–55) discusses. For one thing, there is sometimes formal coincidence between the subjunctive and injunctive, as in the case of *bhuvah*, *bhuvat* ‘(will) become(s)’ (ibid.:236–7). In addition, the 1sg. subjunctive ending *-ā* is sometimes replaced by *-am* to prevent confusion with the (formally identical) 2sg. impera-

brück (1888:287) cites, among others, MS 1.4.7: *putrásya nāma gr̥hṇāti prajā́m evá ānu sám atānīt* ‘He gives [Pres.ind.] his son a name and so **continues/will continue** [Aor.ind.] his lineage’. In such cases, the action of the Aorist follows logically from the fulfillment of the protasis: By the fact of his giving his son a name his posterity is assured. This use of the Aorist indicative thus strongly resembles the futurate use of the augmented Aorist in Homer, which Wackernagel (1926–8 [2009]:229) says “denote[s] a factual, absolutely certain occurrence” (cf. above §4.3).

153. Cf. Jamison 2016:316: “[M]odal forms to non-present stems and the subjunctive across all stems are both in retreat in the Rig Veda and will essentially disappear by early Middle Vedic.”

tive (Hoffmann 1967:247–8). Finally, Kiparsky’s (1968:34–8) proposed syntactic phenomenon of “conjunction reduction” may motivate some of the instances where the injunctive is found after a subjunctive in the futurate use, as in (95) above. The conjunction reduction analysis says that an injunctive, which is unspecified for tense or mood, takes on the temporal or modal specifications of marked verbs that precede it. However, given that there are many instances where the injunctive precedes the marked modal form (i.e., the opposite of what conjunction reduction would predict), as at *RV* I.84.8 (see (120) below), Kiparsky (2005:225) has more recently admitted that the use of the injunctive must be licensed not by the syntax alone but also by discourse context and pragmatic reasoning:

Therefore, it is preferable to assimilate the deployment of injunctive forms to such phenomena as discourse anaphora and the ellipsis of topically salient material. The temporal/modal interpretation of injunctives is analogous to determining the antecedent of a pronoun, a process in which the hearer relies not only on the local syntactic environment, but also on the discourse context, and on the common ground shared between hearer and speaker.

Because the injunctive has a wide variety of possible interpretations from the point-of-view of the present (gnomic, modal, “perfect-like,” performative-reportive), context plays a significant role in licensing its futurate use. Sometimes this involves a preceding subjunctive to establish future time reference (conjunction reduction); other times it is the discourse context that suggests future time reference, as when the injunctive is used in interrogative sentences (Hoffmann 1967:236–55) of the type seen in (95) above, as these questions are often directed at the future.

The Aorist injunctive has a futurate interpretation only 1 time in *RV* II (viz. *bhúvat* ‘will overcome’ at II.22.4f, not securely interpreted), representing 0.7% of all Aorists (out of 137), 1% of all injunctives (out of 84), 3% of all modal Aorist injunctives (out of 39), and 5% of all non-prohibitive modal Aorist injunctives (out of 20).

14. MODAL/DIRECTIVE AORIST: Under this label I consider the directive uses of the Aorist, which in the affirmative may be “imperative-like” or (less often) “optative-like” (type ‘may/would that

someone do such-and-such'), and in the negative, after *mā*, are prohibitive ('don't do/be such-and-such'). I provide examples of both affirmative ((96a)–(96b)) and negative directive ((96c)) Aorist injunctives. For further discussion of the affirmative directive uses of the injunctive see Kiparsky 2005, 1968 and Hoffmann 1967:255–64; for the prohibitive use see Hoffmann 1967:43–73 and Hollenbaugh 2020a.

(96) DIRECTIVE AORIST INJUNCTIVE: IMPERATIVAL (a), OPTATIVAL (b), AND PROHIBITIVE (c)

- a. *asmé agne saṃyádvīram brhántasdm kṣumántaṃ vājāṃ svapatyāṃ rayīm **dāḥ*** (RV II.4.8cd).

'O Agni, **grant** to us a prize of an array of heroes, a lofty cattle-rich one, and wealth in good descendants' (tr. Jamison & Brereton 2014:407).

- b. *táyor íd ávasā vayāṃ sanéma_[AOR.OPT.] ní ca **dhīmahi**_[AOR.INJ./OPT.] syād_[PRES.OPT.] utá prarécanam* (RV I.17.6).

'With the aid of just those two might we win_[AOR.OPT.] and **secure**_[AOR.INJ./OPT.] (the winnings). And might there be_[PRES.OPT.] a surplus.' (tr. Jamison & Brereton 2014:109).

- c. ***mā** no vadhīr indara **mā párá dā mā** naḥ priyā bhójanāni **prá moṣīḥ** āṇḍā **mā** no maghavañ chakra **nír bhen mā** naḥ pátrā **bhet** sahájānuṣāṇi* (RV I.104.8).

'**Don't smite** us, Indra; **don't hand** us over. **Don't steal** our dear delights.

Don't split apart our "eggs," o bounteous and powerful one; **don't split** our "cups" along with their contents' (tr. Jamison & Brereton 2014:248).

The Aor. inj. *dāḥ* 'give!' in (96a) is imperatival. In fact, there is no Aorist imperative in the paradigm of this verb, so the injunctive is regularly used to fill this paradigmatic gap (compare the morphologically similar Gk. Aor. ipv. δός 'give!'). More generally, second- and third-person Aorist injunctives tend to stand in for the badly attested or entirely lacking Aorist imperatives of various paradigms (see Hoffmann 1967:256). Beyond cases of this kind, the Aorist injunctive is not typically used in an imperatival function, and most putative cases admit of other interpretations. We may assume that under normal circumstances the application of the Aorist injunctive in imperatival use is bled by the marked imperatives where available (cf. *ibid.*:256, 261–4). As in the case of the subjunctive (cf. previous item), the Present injunctive has directive force far

less often than the Aorist injunctive, due to the fact that the Present stem has fewer gaps in its modal paradigms (Hoffmann 1967:256–61).

Clear cases of optative function are no more common of the Aorist injunctive than of the Present injunctive (cf. §10.4 below). The Aorist example in (96b) is cited by Kiparsky (2005:224), though of course here *dhīmahi*, if it is an injunctive, is formally not distinct from the root-Aorist optative, so it is not a very strong example, but it is the only possible case known to me.¹⁵⁴ The fact that the optative use of the Aorist injunctive is not more frequent can be partly explained by blocking on the part of the precative mood, which is typically used in this function from the *Ṛgveda* on (Whitney 1889:302–3). But outside the root Aorists optative forms are not common, and we may wonder why the injunctive does not fill in for the missing optatives of the sibilant Aorist paradigms as it does for their missing subjunctive forms (cf. previous item). Part of the answer, in my view, is that the distinction between optative and imperatival meaning is largely neutralized, since they both have directive force of a certain kind (i.e., the difference between ‘may he give’ and ‘let him give’), or at least it is difficult for us to reliably recover such a distinction. So, some injunctives that were used in order to convey a wish may be wrongly interpreted as conveying a command, with the difference between these alternatives being slight and hard to detect. Thus, a certain number of the injunctives considered to be imperatival may be better regarded as optative, though I know of no cases where this *must* be the case. For this reason, I have grouped both of these interpretations together simply as “directive” uses of the injunctive.

The prohibitive use is the most common modal function of the injunctive and the only one that survives beyond the Vedic period. The Aorist injunctive, in particular, is many times more frequent than the injunctives built to the Present or Perfect stems in this function. Unlike the affirmative directives, there is no regular means of expressing prohibition apart from the construction with *mā́* and the injunctive. Accordingly, there is nothing to interfere with the application of the injunctive in negative directive contexts, so the injunctive is regularly applied in the prohibitive function. Apparent exceptions to this rule, where *mā́* occurs with forms other

154. The Aorist indicatives 1pl. *adhīmahi* (RV IV.32.19b) and 3du. *adhītām* (RV X.4.6b) do occur, which may lend support to reading *dhīmahi* as an injunctive rather than optative, as Whitney (1889:302) notes. Kiparsky’s (1968:38) example of *gāt* at RV II.33.14b is probably imperatival ‘let him go’, as is its usual value, rather than optative ‘would that it go’.

than the injunctive, are shown by Hoffmann (1967:92–8) to be superficial and irregular. There are additionally some cases (e.g., *RV* VII.25.4d) of the injunctive in what seems to be its prohibitive function with the negator *ná* ‘not’ rather than *mā*, on which see Hoffmann 1967:101 and cf. Jamison’s (2015–) online *R̥gveda* commentary (ad loc.). If anything, such cases only go to show that the injunctive itself is compatible with prohibitive meaning, and that the negator *mā* merely restricts the interpretation of the injunctive to just its prohibitive one (*pace* Hoffmann 1967:99–102, which is not entirely contradicted by this statement). Thus, *mā* acts adverbially, in a manner similar to the way in which the augment is used to restrict the Aorist to just its indicational interpretations (discussed above).

The preference for the Aorist—and in particular the *root* Aorist—forms of the injunctive in prohibitions is not explainable as a blocking phenomenon. Rather, it is a selectional property of the construction itself, which was originally made with *mā* and the root Aorist injunctive, as I have shown in Hollenbaugh 2020a. Only when a root Aorist stem was paradigmatically unavailable were alternative stems used, including the thematic and sibilant Aorists, as well as the Present and Perfect stems. Further, despite Hoffmann’s (1967:43–106) oft-cited analysis, there is no semantic distinction between the Aorist and Present/Perfect injunctive in the prohibitive construction (see again Hollenbaugh 2020a). The choice between the two was governed by purely formal rather than functional considerations.¹⁵⁵

Directive uses of the Aorist injunctive occur 38 times in *RV* II (28% of all Aorists), all securely injunctive, 37 securely interpreted (41%). 5 of them are imperational (13%), 4 securely interpreted (11%); 33 are prohibitive (87%), all securely interpreted (89%). These account for 72% of all modal uses of the Aorist injunctive in *RV* II (38 out of 53), 97% of those that are securely interpreted (37 out of 38), and 45% of all injunctives (38 out of 84), 73% of those that are securely interpreted and securely augmentless (37 out of 51).

SUMMARY OF MODAL USES:

In all, there are up to 53 modal uses (gnomic, futurate, and directive) of the Aorist in *RV* II

155. Note that there are several cases in which the Aorist injunctive has a clear inhibitive meaning, rather than a preventive one, as in *ní vartadhvam mānu gāta* ‘Turn back. **Don’t keep going**’ (*RV* X.19.1a). On the preventive/inhibitive distinction see the discussion of (123) below.

(39% of all Aorists), 38 of which are securely interpreted (42% of all securely interpreted Aorists). All of these are injunctive (63% of the total Aorist injunctives), 50 securely so (63% of the total). The modal uses of the Aorist injunctive are thus considerably more frequent than the modal uses of the Present injunctive (cf. §10.4 below). This suggests that the application of the Aorist injunctive in modal contexts is less often blocked by marked modals built to Aorist stems than Present injunctives are blocked by marked modals built to Present stems.

9.4 Imperfective readings of the Aorist in the *Ṛgveda*(?): Possible examples

The Aorist does not ordinarily have imperfective meaning, nor does it typically take primary suffixes. However, there are a series of root Aorists that have primary endings in the *Ṛgveda*, as follows:

- *dāti* (RV IV.8.3c, V.48.5d, VI.24.2d, VII.15.12d, VII.42.4d)
- *dhāti* (RV II.38.1c, IV.55.1d, VII.90.3b)
- *pānti* (RV II.11.14d), *pāsi* (RV I.134.5fg); *pātháh* (AV VII.29.1)
- *sthāti* (RV II.31.3c)

Some of these may be understood as subjunctives, but several of them occur in highly presential contexts. So, for example, *ánu nú sthāti* at RV II.31.3c could be read as either ‘now stands beside’ or ‘will now stand beside,’ though the latter is perhaps favored by the sjv. *jūjuvat* ‘will speed’ in the next verse (4b). But *pānti* in (97) occurs after a predicated Present participle (cf. Jamison’s (2015–) online *Ṛgveda* commentary ad loc.), whose function typically seems to be marking progressive aspect. This suggests a presential reading of *pānti* ‘they drink, are drinking’.

(97) AORIST WITH PRIMARY ENDING WITH PRESENTIAL INTERPRETATION(?)

*sajóṣaso yé ca mandasānāḥ*_[PRES.PART.] *prá vāyávaḥ pānti*_[AOR.] *ágraṇītim* (RV II.11.14cd).
 ‘And they who jointly are finding_[PRES.PART.] exhilaration—(those) Winds **drink**_[AOR.] [**or**
 ‘**are drinking**’?] the first offering’ (tr. Jamison & Brereton 2014:415, interpolation mine).

A similar case can be made for *pāsi* ‘you drink’ (*RV* I.134.5fg), where, however, the sense seems to be gnomic-habitual: *tvám víśvasmād bhúvanāt pāsi dhármaṇā* ‘You drink before every creature by statute’ (tr. Jamison & Brereton 2014:305). Still, a subjunctive interpretation ‘will drink’ or even “a nonce *-si* imperative” ‘drink!’ cannot be entirely ruled out (see Jamison’s (2015–) online *R̥gveda* commentary ad loc.).

The forms *dāti* ‘gives, will give’ and *dhāti* ‘puts, will put’ are generally taken to be subjunctives. However, Whitney (1889:301, §836a) says that these two forms are “almost indicative in value.” While I do not wish to suggest that none of the occurrences of these words have a future/subjunctive value (some occur alongside marked subjunctives), it does seem likely that at least some have a presential value. Most of these seem to me to admit of a gnomic-habitual reading and thus would be placed among the modal uses (not indicativ) under the system adopted here. Still, it is significant if this form is used to express gnomic meaning, since this is one of the injunctive’s most characteristic functions. As Hoffmann (1967:256, 261–2) observes, the injunctives *dāḥ* and *dhāḥ* almost always have a directive force, respectively ‘give!’ and ‘put!’ This is because these root Aorists lack imperative forms, so the injunctive “fills in” in this role of the paradigm.

Elsewhere, Hoffmann (1967:111) notices that there are other root Aorists with primary endings:

- *krthāḥ*, *krtha* (e.g., *RV* X.97.9d)
- *gathā* (*RV* VIII.20.16)
- *bhūthāḥ*, *bhūtaḥ* (e.g., *RV* VI.67.5c)

Hoffmann (1967:111) argues that these Aorists with primary endings are motivated by the fact that their corresponding injunctive forms are associated with directive meaning. Again, these slots of the paradigm lack distinctive morphological imperative forms, so the injunctives are recruited for the directive function. So, because speakers associated injunctives like 2pl. *krta* with the directive meaning ‘make!’, there seems to have been a sense that the gnomic-habitual functions were not easily accessible to these forms. As Hoffmann (1967:111) observes, “Im allgemeinen... werden Injunktiv-Formen, die mit dem Imperativ zusammenfallen, vermieden.”

In order to convey gnomic-habitual meaning, the primary endings were added, creating a series of hybrid Aorists with primary endings used functionally as injunctives, of the type 2pl. *kr̥tha* ‘you make (characteristically)’. There is also at least one thematic Aorist with a primary ending: *takṣatha* (RV IV.36.3d, X.53.10b), on which see Narten 1964:124–5. Here again, as per Hoffmann (1967:111), the 2pl. Aor. inj. *takṣata* is always imperative in meaning, so the primary ending is used to avoid ambiguity, thereby making its “injunctive-like” function (i.e., gnomic-habitual) readily accessible.

Given that the Aorists just discussed have what amount to injunctives with primary endings, and that these are motivated, ultimately, by the lack of an imperative form in the relevant slot of the paradigm, it may well be that in *dā́ti* and *dhā́ti* we have the same situation. These would thus not be subjunctives (at least not in all of their occurrences) but injunctives that are using primary endings in order to counteract a presupposition of the grammar, namely that their injunctive equivalents (*dā́t* and *dhā́t*) are functionally imperative (directive). Whenever the gnomic-habitual interpretation is desired, then, a speaker would stand the best chance of being understood by using the “pseudo-injunctive” forms *dā́ti* and *dhā́ti* in place of the real injunctives (*dā́t* and *dhā́t*).

Further, in one of its occurrences *dhā́ti* may even be interpreted as having a progressive present interpretation, given in (98), like *pā́nti* ‘they drink’ in (97) above.¹⁵⁶

(98) AORIST WITH PRIMARY ENDING WITH PRESENTIAL INTERPRETATION (?)

*úd u śyá deváh savitá savā́ya śasvattamám̐ tádapā váhnir asthā́t*_[AOR.IND.]

*nū́nām̐ devébhyo ví hí **dhā́ti***_[AOR.INJ.?] *rátanam áthā́bhajad*_[PRES.INJ.?] *vītíhotram̐ svastaú*
(RV II.38.1).

‘So this god Savitar has stood up_[AOR.IND.] to impel the latest of each and everything—the draft-horse whose work this is:

Seeing as (Savitar) **is** currently distributing_[AOR.INJ.?] treasure to the gods [=the Milky Way], accordingly he is liable to give a share_[PRES.INJ.?] in well-being to the one of pursuit-

156. Here cf. Hitt. *tezzi*, Lyc. *tadi* ‘puts’ (as it were < **d^heh₁-ti*), which is morphologically identical to *dhā́ti* (when not subjunctive). It is thus possible that a primary ending could be added to an inherited root Aorist (the so-called “*tezzi*-principle”) already in PIE, though, given the overall scarcity of such things, it is perhaps more likely that this was done independently in the Anatolian and Indo-Iranian branches.

worthy oblations' (tr. mine).

Here I read “*áthābhajad*” as *átha á bhajat*, taking *bhajad* to be injunctive, against the Padapāṭha, though my interpretation of *dhāti* as present progressive ‘is giving’ does not depend on this assumption (for discussion and alternative interpretations see Jamison’s (2015–) online *R̥gveda* commentary ad loc.). I find reading an Imperfect *abhajat* here to be the least desirable possibility, particularly if it is to be interpreted as ‘has given a share’, as Jamison & Brereton (2014:457) take it, since the resultative/recent-past interpretation is not typical of the Imperfect (albeit not impossible, cf. §10 below). Reading it instead as a Present injunctive (*bhajad*), I interpret it modally (i.e., futurate): Seeing as Savitar is currently in the process of taking care of the gods, surely we mortal worshipers are next. In any case, the adverb *nūnām* ‘now’ makes a presential, event-in-progress reading of *vī dhāti* likely: ‘is currently distributing’. In addition, the fact that this is the first verse of the hymn, and that the hymn is identified as an evening hymn, “in which Savitar quiets the world for the night” (Jamison & Brereton 2014:456) suggests that the action of *vī dhāti* is presented as something that is currently underway as the stars come out, not a gnomic-habitual occurrence or one located in the future.

Though both (97) and (98) occur in *RV* II, the uncertainty of their interpretations has prevented me from counting them both in my figures for the usage of the Aorist injunctive. However, if either one of them is correctly interpreted and to be considered an Aorist injunctive (functionally if not formally), then it would add one to the count of indicative injunctives in *RV* II. I therefore have decided to count one such example (either of the two) as a compromise, so as not to omit potentially relevant data while also not overestimating its validity. Thus, the total count of indicative Aorists in *RV* II is 73 rather than 72, and the total injunctives number 84 rather than 83.

The meaning of the primary ending *-ti* (etc.) seems to be [NON-PAST], as it is the regular ending of the Present and Future tenses and (partially) the subjunctive mood in Sanskrit (and IE generally). So there is nothing necessarily incompatible about the primary ending and the Aorist stem, since it would simply entail present time reference ($t_A \geq t_0$) of the perfect(ive) aspect ($t_E \subseteq t_A$)—a configuration that underlies the “perfect-like” and performative-reportive readings as well. What is more surprising is the apparent event-in-progress interpretation of the Aorists

in (97) and (98), as the progressive reading, requiring that $t_E \supset t_A$, would seem incompatible with perfective aspect. However, we find the Aorist used similarly Greek (though not, to my knowledge, in Homer), as shown in (99), where the action of the Aor. ind. ἐργάσαο appears to be ongoing at the time of speech, thus ‘you are doing’, as it is specified by the Pres. ind. δακρύεις ‘you are weeping’.

(99) PROGRESSIVE AORIST IN CLASSICAL GREEK(?)

ὦ βασιλεῦ, ὥς πολλὸν ἀλλήλων κεχωρισμένα ἐργάσαο_[AOR.IND.] νῦν τε καὶ ὀλίγω πρότερον· μακαρίσας γὰρ σεωυτὸν δακρύεις_[PRES.IND.] (Hdt. 7.46.1).

‘O king, what a distance there is between what you **are doing**_[AOR.IND.] now and [what you did/were doing] a little while ago! For having declared yourself blessed you are weeping_[PRES.IND.]’.

As it turns out, the denotation typically assigned to perfective aspect ($t_E \subseteq t_A$) is technically compatible with an interpretation that seems notionally very close to the progressive, namely $t_E \subset t_A \wedge t_E \supset t_0$.¹⁵⁷ This allows for an event to be ongoing (i.e., in progress) at speech time while still being included in an assertion time (which must in turn also include the speech time), as shown in Figure 9.1.

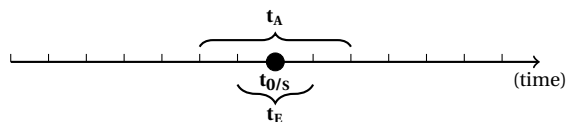


FIGURE 9.1: Progressive-like interpretation of perfect(ive) aspect

Ordinarily, this interpretation of the Aorist is surely blocked by the Present indicative, which is more highly specialized for the progressive use ($t_E \supset t_A$). Yet under certain conditions, it seems, this logically possible reading of the Aorist can be realized, as in (99), where the verb ἐργάσαο must look both backwards and forwards to what is happening ‘now’ and what has happened ‘a little while ago’, which may be the reason why this peculiar usage has been licensed in the Greek.

157. As I have adopted a fairly standard definition of perfective aspect ($t_E \subseteq t_A$), the allowance of this “progressive-like” configuration is not unique to my analysis, but is tacitly shared by virtually all prior accounts of perfectivity.

This analysis can be adopted to explain the *Ṛgvedic* data in (97) and (98) as well, though what exactly might have motivated a Vedic poet to decide to use an Aor. *dhāti* instead of the Pres. ind. *dádhāti* in this meaning seems impossible to determine.

9.5 Functional range of the *Ṛgvedic* Aorist as compared to Homeric

The distribution of uses of the Aorist indicative/injunctive in *RV* II is summarized in Table 9.3. Percentages given in the bottom two rows are taken out of the total for those rows. Thus, for instance, there are 8 “perfect-like” injunctives, which represent approximately 10% of the 84 injunctives in *RV* II. Percentages in the row above these, however, are taken out of the total for their columns. So, for instance, the combined total for past terminative uses of the Aorist indicative and injunctive in *RV* II is 19, which represents about 26% of the 73 indicatival Aorists (indicative and injunctive). I give no percentage for the total of the performative-reportive uses.

TABLE 9.3: Distribution of the Aorist indicative/injunctive in *Ṛgveda* II (137 total)

| | indicatival (73) ^a | | modal (53) | | | performative-reportive (11) |
|-----------|-------------------------------|----------------------------|------------------|---------------------|------------------|-----------------------------|
| | “perfect-like” (53, 73%) | past terminative (19, 26%) | gnomic (14, 26%) | directive (38, 72%) | futurate (1, 2%) | |
| ind. (53) | 45 (85%) | 7 (13%) | 0 | 0 | 0 | 1 (2%) |
| inj. (84) | 8 (10%) | 12 (14%) | 14 (17%) | 38 (45%) | 1 (1%) | 10 (12%) |

^a It will be noticed that 53 and 19 do not make 73, and that the bottom row does not add up to 84. This is because the imperfective Aorist injunctive discussed in §9.4 is omitted from this table, due to its scarcity and uncertainty, but is included in the total count, for reasons explained above.

We may observe that the Aorist in its indicatival functions is robustly “perfect-like,” especially when augmented. As mentioned in Section 9.2 above, the fact that the Aorist has past terminative uses so seldom is odd if it represents a perfective gram, which are cross-linguistically preferred in such contexts (cf., e.g., Ö. Dahl 1985:83; Bybee et al. 1994:83; E. Dahl 2010:78), and in competition with other forms, such as a simple past tense gram, the perfective may block the application of the simple past in its terminative functions (cf. Hollenbaugh 2021b). If the Imperfect in the *Ṛgveda* represented a simple past gram, denoting $t_E \circ t_A$ (E. Dahl 2010:216), and the Aorist represented a perfective gram, denoting $t_E \subseteq t_A$ (ibid.:301), then the Aorist would be

the semantically “stronger” form, in the sense that it has the more specific denotation. These two functional categories would be in competition with one another for use in past terminative contexts, and the Aorist, as the form more precisely specified for terminative meaning ($t_E \subseteq t_A$), would be predicted to be preferred, blocking the application of the Imperfect in past terminative contexts. This would, in effect, restrict the application of the Imperfect to just its imperfective functions (past progressive, continuous-state, habitual, etc.). But, as will be seen in Section 10 below, this is not at all what we find in Sanskrit. Instead, we find the Imperfect (simple past) strongly preferred to the Aorist in past terminative contexts (e.g., sequential narration). Given its preference in “perfect-like” uses, dispreference in past terminative uses, and lack of clear interaction with the (semantically broader) Imperfect in past terminative contexts, the Ṛgvedic Aorist simply does not fit the profile for a perfective gram *per se*. On this basis I concluded in Hollenbaugh 2018 (with Kiparsky 1998:39, 41–3, 45–6 and others) that the Ṛgvedic Aorist denoted not perfective but *perfect* aspect, representing the perfect gram type.

Nonetheless, it is not trivial that there are up to 19 past terminative uses (26%), and the meaning of the Aorist must be compatible with past reference time. As a strict perfect denotation would predict that past reference of this kind is impossible (it would predict that the Aorist has past reference only when only counter-sequential), the conclusions of Hollenbaugh 2018 are in need of some refinement in order to adequately account for the observed usage of the Aorist. Still, the Aorist in the *Ṛgveda* is more robustly “perfect-like,” and less frequently past terminative, than is the Aorist in Homer (cf. §4.4 above). This may be taken to suggest that the Aorist in the *Ṛgveda* has grammaticalized less along the grammaticalization pathway in (9) above (§2.1), repeated here as (100), than has the Aorist in Homer.

(100) stative-resultative » perfect » emergent perfective » perfective, simple past

If so, then, typologically speaking, the Aorist in the *Ṛgveda* would represent an emergent perfective that is somewhat closer to the perfect stage that precedes it in (100), while the Aorist in Homer would represent an emergent perfective that has grammaticalized more nearly to the perfective stage that follows it in (100). In either case, taking the perfect stage as the (prehistoric) starting point of the Aorist is consistent with its observed usage in these two branches. We have

only to assume that in Homeric and Ṛgvedic we are looking at two reflexes of a perfect gram that have grammaticalized toward being perfective grams at somewhat different rates. As regards the particulars, observed differences in relative frequency of certain uses can be accounted for on the basis of systematic differences in the verb systems of the individual languages (discussed below).

If, however, we were to suppose that the functional range of the Aorist in one or the other language represented the original, inherited functional range of the Aorist in the proto-language, it would be difficult to explain the developments from one to the other in a typologically or semantically rigorous way. Likewise, were we to suppose (as is most commonly done in the IE linguistics literature) that the Aorist in the proto-language represented a perfective gram, its robust “perfect-like” character in both Homeric and Vedic would not be predicted, and, given the subsequent development of the Aorist toward perfectivity in both languages (cf. Hollenbaugh 2021b and Whitney 1889:201), such an account would have to assume that a perfective gram in the proto-language had become more “perfect-like” by the time of its attestation in both Homeric and Ṛgvedic, then would (again in both branches) have had to revert, as it were, back toward perfectivity in post-Homeric Greek and post-Vedic Sanskrit. Because such a view would require not only parallel developments, but parallel developments of a typologically irregular kind, while failing to make correct predictions about the attested usage of the Aorist and its diachronic developments *within* the documented languages, the assumption that the Aorist represented a perfective gram in PIE (or PNIE) is not credible.

By contrast, if the Aorist in the proto-language was a perfect gram, its development toward perfectivity in both languages represents a typologically regular trajectory, so the fact that both branches show parallel developments along the same trajectory is unproblematic. In addition, the fact that the usage of the Aorists in the earliest documents of Greek and Sanskrit is more “perfect-like” than it is at later stages of these languages is entirely expected under an account that views the Aorist as moving, gradually, along the grammaticalization pathway of (100). Seeing such a shift occur, as it were, before our very eyes within the attested languages argues strongly against viewing the Aorist as having originally denoted perfective aspect, since in that case we should expect it to remain stably perfective throughout its attestation (how could it

become more perfective-like if it was a perfective to begin with?), with no significant difference between the usage of the Aorist in Homer/the *Ṛgveda* and post-Homeric Greek/post-Vedic Sanskrit.

While the difference between the usage of the Aorist in Homer and the *Ṛgveda* seems extreme when taken all together (the Homeric Aorist is regular in past narration, the Vedic Aorist can be used modally, etc.), as a matter of fact the difference in usage between the Aorist in *Ṛgveda* II and the Aorist in *Iliad* 1 is rather slight if we look only at the usage of the Aorist in dialogue in *Iliad* 1 and only at the indicatival uses of the Aorist in *Ṛgveda* II. Recall that quoted speech is the only discourse environment in Homer in which all readings of the Aorist are possible. Looking at Aorists in quoted speech alone helps to partially account for text type and puts the Aorist of Homer on roughly even footing with the Aorist of the *Ṛgveda*, which is not an especially narrative text and often takes place in the “now” of those who are reciting the hymns as part of an ongoing ritual practice. Likewise, the modal uses of the Aorist injunctive may be set aside (for now), since the injunctive is not a distinct functional category in Homeric and so cannot be directly compared to the augmentless forms in Homer in the same way as the indicatival injunctives can. This leaves only the indicatival injunctives to compare with the (regularly indicatival) augmentless forms in Homer, taken together with the augmented indicatives. Comparing the data in this way, we find that the Aorist in the speeches of *Iliad* 1 has 48 “perfect-like” uses to 26 past terminative uses, a spread of about 65% to 35% or 1.8:1 (cf. Table 4.2 in §4.4 above). This is not far distant from the spread of indicatival usage of the Aorist observed in *Ṛgveda* II, where there are 45 “perfect-like” Aorists to 19 past terminative ones, a spread of about 74% to 26% or 2.8:1. Certainly the *Ṛgvedic* Aorist is “perfect-like” more frequently and past terminative less frequently than is the Homeric Aorist, but not significantly so ($p = 0.59$, Fisher’s exact test). We must therefore account for approximately the same distribution of usage of the *Ṛgvedic* Aorist—present referring and past referring—as that of the Homeric Aorist. The most straightforward way to do so is to assume that the Homeric and *Ṛgvedic* Aorists had similar (if not identical) denotations, both representing emergent perfective grams (broadly speaking), as I will make explicit in the next section (§9.6).

Still, the differences between the languages in relative frequencies of usage that we do ob-

serve should be accounted for in some way. If the augmentless Aorist is found less frequently in past narration in the *Ṛgveda* than it is in Homer, and if the augmented Aorist is found somewhat more frequently in “perfect-like” functions than it is in Homer, these facts may be attributed to a variety of language- and text-type-specific factors. Importantly, the injunctive is a distinct functional category in Vedic as it is not in Homeric. As explained above, this means that augmented Aorists will for the most part show up only insofar as they are serving to rule out confusion with alternative interpretations that the injunctives would leave open in present-referring contexts. Further the augment is avoided in past narration so as not to imply “perfect-like” meaning. There is thus greater urgency to use the augmented Aorist in “perfect-like” functions and to avoid it in past terminative functions than there is in Homer.

On the other side, the augmentless forms in Homer can only be indicative. If one looks at Table 9.3 and takes away all the modal and performative-reportive uses of the injunctive, its only remaining distinctive feature would be that it is favored in terminative uses. This is effectively what we find in Homer: Having lost its non-indicative uses the augmentless Aorist is distinguishable from the augmented Aorist only insofar as it is preferred for past terminative uses. So, while the augmentless Aorist in the *Ṛgveda* is spread across a relatively wide range of distinctive functions, thus diminishing the relative importance of its past terminative usage, this is not true of the augmentless Aorist in Homer, which has little else to mark it as functionally distinct from the augmented forms.

Further, in Homer the Imperfect has already begun showing more of an “imperfective” profile than the Imperfect/Present injunctive in the *Ṛgveda*. This means that the primacy of the Imperfect to sequence events in past narration is less extreme in Homer than it is in the *Ṛgveda*, since the Imperfect in Homer has non-terminative uses at least some of the time. In the *Ṛgveda*, on the other hand, the Imperfect/Present injunctive is almost always terminative (cf. §10 below), so the application of the (augmentless) Aorist in past sequential contexts would typically be blocked (by the Imperfect/Present indicative). This may contribute to the explanation of why the *Ṛgveda* uses its Aorist in past terminative functions so much less frequently than Homer does.

Finally, the performative-reportive use of the *Ṛgvedic* Aorist is telling. This is not a function

typical of strict perfect grams cross-linguistically (Fortuin 2019:44–5). Perfectives, on the other hand, are typologically more common in the performative function (ibid.:45). The expression of performative-reportive meaning by the Ṛgvedic Aorist injunctive therefore strongly suggests that the Aorist has grammaticalized toward perfectivity, such that it is synchronically not a perfect gram in the strict sense. As discussed above (§9.2), the performative-reportive interpretation requires that eventuality time be coextensive with speech time ($t_E = t_S$), and it is terminative in the sense that eventuality time is included in assertion time ($t_E \subseteq t_A$). The performative interpretation is thus entirely in keeping with the denotation of perfective aspect generally ($t_E \subseteq t_A$). So, even though the Aorist in the *Ṛgveda* is not used to express past terminative meanings nearly as often as its counterpart in Homer, it nonetheless *does* have fairly robust terminative usage, taking into consideration the performative-reportive uses in addition to the past terminative ones.

There are other correspondences between the Aorist in Homer and the Aorist in the *Ṛgveda* as well. Most striking is the general lack of complexive as a use, which in both languages is regularly expressed not by the Aorist but by the Imperfect. This is a non-trivial detail to which the emergent perfective denotation given in (52) above is ideally suited, as it entails the unavailability of the complexive use to the Aorist.

On the whole, the semantics of the Aorists in the two languages can be reconciled fairly straightforwardly. As regards aspect, the denotation of the Ṛgvedic Aorist can be taken to be essentially identical to that of the Homeric Aorist, thereby predicting the same general diversity of uses in both languages, including compatibility with both “perfect-like” and past terminative usage and an aversion to complexive usage. Regarding modality, the Homeric Aorist can be assumed to have an additional entailment that it be [NON-MODAL], which the Ṛgvedic Aorist lacks and so is compatible with all manner of modal uses whenever the augment is not there. Thus in Vedic the augment can be taken to contribute the entailment that the verb be [NON-MODAL], while the absence of the augment leaves the verb vague as regards modality.

It is to be borne in mind that semantics only goes so far in explaining the observed usage of a particular form, much less the differences in observed usage of cognate forms across languages. The role of semantics is to establish the basis for the functional range of the form in question,

setting parameters on how it can and cannot be used and thus making correct predictions about its usage. But this tells us little about relative the frequency of those uses, nor how the usage of one form interacts with other forms in the verb system. For this, we must take pragmatics and discourse context into account. Doing so, we are able to understand why two cognate forms with essentially the same functional profile can exhibit such different behavior in terms of how their functions are distributed across utterances and how their usage affects and is affected by other functional categories in each language. The change in one functional category affects the whole system, so the fact that the usage of Homer’s Imperfect differs from that of the *R̥gveda*’s is relevant to the way in which the usage of their Aorists differ as well (and vice versa).

9.6 Denotation of the R̥gvedic Aorist

For the reasons given in the preceding section, I assign the R̥gvedic Aorist essentially the same semantics as that assigned to the Homeric Aorist in (52) above. I thus take the Aorist in the *R̥gveda* to be an emergent perfective gram. Its relatively more “perfect-like” behavior in comparison to the Homeric Aorist—and, equivalently, its less frequent terminative usage—can be explained by a variety of language-specific factors (including pragmatic ones), as discussed above. The denotation of the R̥gvedic Aorist is given in (101). It is identical to (52) except in one particular: The eventuality time must at least partially precede *or be coextensive with* the evaluation time.¹⁵⁸ I use the symbol “ $\not\prec$ ” to mean ‘does not completely follow’ or, equivalently, ‘at least partially precedes or is coextensive with’. This is done in order to allow for the performative-reportive use of the Aorist, which requires that eventuality time and speech time be coextensive ($t_E = t_0$).

(101) EMERGENT-PERFECTIVE DENOTATION OF THE AORIST IN R̥GVEDIC SANSKRIT

$$[\lambda P \lambda t_A. \exists e (t_e \subset t_A \wedge t_e \not\prec t_0 \wedge P(e) = 1)]$$

For some eventuality e , eventuality time t_e is properly included in assertion time t_A , and the eventuality time does not completely follow the local evaluation time t_0 (by default =

158. However, on the possibility that the denotation of the Homeric Aorist should match that of the R̥gvedic Aorist even in this respect see n.87 above (and cf. n.86).

speech time), and the eventuality description P applied to the eventuality e is true ($=1$).

As in Homeric, this denotation correctly rules out the complexive use of the Aorist, since the relation $t_E \subset t_A$ does not allow for eventuality time and assertion time to be coextensive ($t_E = t_A$), which is a requirement of the complexive interpretation. It captures the stative (and possible imperfective) interpretations by allowing eventuality time to include speech time ($t_E \supseteq t_0$). The “perfect-like” readings are captured by the compatibility of (101) with the relation $t_E \subset t_A \wedge t_A \supset t_0$, provided that the eventuality time does not follow the evaluation time ($t_E \not\supset t_0$). Unlike Homeric and Classical Greek, where the Perfect blocks the application of the Aorist in the universal use (cf. §4.5 above), the R̥gvedic Perfect is not particularly well suited to the universal use in comparison with the Aorist, so no blocking occurs. We accordingly find the Aorist on occasion having a universal function, as shown in Section 9.1 above, which the denotation in (101) does not strictly rule out. While the “perfect-like” uses are regular under the denotation of (101), still the past terminative uses of the Aorist (concentrative-sequential and inceptive) are permitted by the fact that the assertion time does not obligatorily include evaluation time, so the Aorist may be past ($t_A < t_0$) and terminative ($t_E \subset t_A$), provided that it is not complexive ($t_E \neq t_A$). When the terminative use is present in time reference ($t_A \supseteq t_0$) it gives the performative-reportive interpretation, such that $t_E \subset t_A \wedge t_E = t_0$.

As for the modal (directive and gnomic) uses, these are assumed to be compatible with (101), though their specific implementation is beyond the scope of this study. Moreover, aspect appears to be generally neutralized in Vedic outside the indicative and injunctive, such that in the modal domain aspectual contrast is not a relevant component of the meaning of the verb. This is true of the imperative, subjunctive, and optative (see Bloomfield & Edgerton 1930:63–4, 94–114, 130–3 and Hollenbaugh 2018:54–6), as well as gnomic (cf. (94a) above) and prohibitive (see Hollenbaugh 2020a) modal values: There is no discernible aspectual contrast between the Aorist and Present stems in modal forms, and the choice of one stem or the other can mainly be explained by formal rather than functional considerations, there being few verbs with competing Aorist and Present stems available in their modal paradigms. Modality thus neutralizes the distinction between the Aorist and Present stems, such that we find the Aorist and Present injunctives in their modal functions used without aspectual contrast, despite the otherwise dis-

tinct aspectual differences inherent in the denotation of each stem. For this reason, the Aorist and Present injunctive show distinct aspectual contrasts only in their indicatival uses.

It should be noted, however, that the denotation in (101) does not strictly rule out future time reference, even though it requires that the eventuality time not follow the evaluation time ($t_E \not< t_0$). Following Klein (1994:124) (*inter alios*), I take future tense to be the realization of $t_{0/s} < t_A$ (speech/evaluation time precedes assertion time). The relation $t_s < t_A$ is not ruled out by (101), such that the future time reference of the modal interpretations of the Aorist injunctive are not strictly incompatible with (101). Just as the futurate interpretation of the Aorist indicative in Homer is compatible with an emergent perfective denotation (cf. §4.5 above), so too are the futurate (or “subjunctive-like”) uses of the Aorist injunctive in the *Ṛgveda*. And, as in Homer, the restricted application of the Aorist in its futurate uses is expected, given the entailment $t_E \not< t_0$. For this reason we do not find the Aorist injunctive freely expressing future tense *per se*; rather, the futurate (“subjunctive-like”) interpretation of the Aorist injunctive arises only when future time reference is salient in the discourse (as in (95) above) or when there is no subjunctive available to the Aorist stem being used, in which case the injunctive is recruited to fill the paradigmatic gap.

The denotation in (101) thus accounts for exactly those readings of the Aorist that we find regularly attested in the *Ṛgveda*, irrespective of augmentation. I therefore take (101) to represent the basic meaning of the Aorist in the *Ṛgveda*, being compatible with all of its regular functions and incompatible with functions that it does not regularly have. The *Ṛgvedic* Aorist thus represents an emergent perfective gram, just as the Aorist in Homer, though these need not be absolutely identical in terms of their relative “distance” from the perfect or perfective gram types along the grammaticalization pathway in (100). This should also not be taken to imply that we expect the relative frequencies of their uses to be absolutely identical in both languages, since, as we have seen, various systemic and pragmatic factors are at play that constrain the usage of each Aorist in its own language.

I take the meaning of the augment in *Ṛgvedic* to be [NON-MODAL], such that its use excludes just the modal (directive and gnomic) interpretations otherwise available to the verbal base. This differs from Homer where the augment does not contribute the meaning [NON-MODAL],

seeing as the Aorist and Imperfect are always functionally indicative irrespective of the augment. As discussed above, I take Vedic to have innovated from the proto-language in this respect, while Homeric maintains the original sense of the augment to convey certainty. This is because, diachronically, it is more straightforward for an adverbial element bearing certain conventionalized implicatures (as we find in Homer) to grammaticalize into a marker of indicative mood (i.e., a morpheme that entails the meaning [NON-MODAL]) than the reverse, since the latter would essentially require de-grammaticalization, and so would be typologically irregular.

CHAPTER 10

Imperfect indicative and Present injunctive

In this chapter I examine the usage of the Imperfect indicative and Present injunctive in the *R̥gveda* (hereinafter “Imperfect/Present injunctive”).¹⁵⁹ As with the Aorist, I will first enumerate the uses of the Imperfect/Present injunctive, citing examples and frequencies of occurrence (§§10.1–10.4), then generalize over these uses to determine its functional range (§10.5), on the basis of which I assign a denotation to the Imperfect/Present injunctive that accounts for its observed usage (§10.6).

Table 10.1 summarizes the functional range of the Imperfect/Present injunctive (column 2, bolded for clarity) as compared with the Aorist indicative/injunctive and Perfect indicative/injunctive/Pluperfect. See the beginning of Sections 4 and 9 above for an explanation of the notations used and various particulars about the functional labels in all three columns.

TABLE 10.1: Readings of the *R̥gvedic* Pres. inj./Ipf., Aor. inj./ind., and Pf. ind./inj./Plpf.

| | AOR. INJ./IND. | PRES. INJ./IPE. | PF. IND./INJ./PLPF. |
|----|------------------------------------------|---------------------------------------------------------|---------------------------------------------------------|
| 1. | [w/ primary ending?] | progressive-conative {events} | <i>intensive-frequentative?</i> (rare) {activities+} |
| 2. | stative {states} | (past/pres.) continuous state {states} | stative {states} |
| 3. | resultative (recent and non) {events} | resultative (rare) {transfm.} | <u>resultative</u> (recent and non) {events} |
| 4. | experiential {events+} | experiential? (rare) {events} | experiential {any} |
| 5. | counter-sequential {transfm.} | counter-sequential {transfm.} | <i>counter-sequential</i> {transfm.} |
| 6. | <i>present universal</i> {any} | present universal (rare) {non-transfm.+} | universal (rare) {activities+} |
| 7. | concentrative-sequential {events} | concentrative-sequential {any} | <u>concentrative-sequential</u> {events} |

159. Note that the Imperfect is necessarily indicative, so I will generally not include the word *indicative* when referring to it.

| | | | |
|-----|-------------------------------------|-------------------------------------------|------------------------------------|
| 8. | × | complexive {non-transfm.} | complexive {activities+} |
| 9. | inceptive {non-transfm.} | inceptive {non-transfm.} | (Pf. inj.), (Plpf.?) {activities+} |
| 10. | <u>performative-reportive</u> {any} | reportive {events} | × |
| 11. | [<i>exp. only</i>] {activities+} | past pluractional/hab. {events} | (Plpf.?) {events} |
| 12. | <u>gnomic</u> {any} | gnomic {events+} | <u>gnomic-empiric</u> {any} |
| 13. | <u>futurate</u> {events} | futurate {achiev.+} | <u>futurate?</u> {states+} |
| 14. | <u>modal/directive</u> {any} | modal/directive {any} | (Pf. inj.) {any} |

I will proceed with discussion of the second column in the same manner as for the Homeric Imperfect, grouping the readings into imperfective, consisting of progressive-conative and past/present stative uses (rows 1–2), followed by “perfect-like” (rows 3–6), terminative (rows 7–10), and pluractional–modal (rows 11–14). Note that the resultative and counter-sequential readings (rows 3 and 5) are treated together under a single heading below, due to the scarcity of the Imperfect/Present injunctive in these functions.

10.1 Imperfective readings of the Present injunctive/Imperfect: Examples & frequency

1–2. PROGRESSIVE-CONATIVE AND CONTINUOUS STATE IMPERFECT/PRESENT INJUNCTIVE: As mentioned in Section 2 above, Whitney (1889:201) states that “[i]n no period of the Sanskrit language is there any expression of imperfect... time” (cf. similarly Kiparsky 1998:29, 56–7, n.3). By this he seems to mean that neither the Imperfect nor any other form was used to express imperfective aspect in the past. Nonetheless, there may be reason to believe that this was not the case, and that the Imperfect (and Present injunctive) could have imperfective interpretations in the *R̥gveda*.

The progressive reading of the Imperfect/Present injunctive is scarcely attested and never clearly so, as E. Dahl (2010:209–13) discusses. This is partly because progressive meaning is typically expressed in Vedic (as often in Homeric) by a Present participle, which may be predicated and function as the main verb in its clause (cf. (97) above). Yet if a Vedic poet was to refer to an event-in-progress in the past with a finite verb, the Imperfect/Present injunctive appears to have been the way of doing so, as a handful of reasonably clear examples suggest. I provide

examples in (102) (repeated from (79) above).

(102) PROGRESSIVE (AND CONTINUOUS-STATE) IMPERFECT (a) AND PRESENT INJUNCTIVE (b)

- a. *ároravīd*_[IPF.] *vṛṣṇo asya vājro amānuṣaṃ yān mānuṣo nijúrvāt*_[PRES.SJV.] (RV II.11.10ab).

‘The mace of that bull **kept bellowing**_[IPF.], when Manu’s ally was about to lay low_[PRES.SJV.] Manu’s enemy’ (tr. mine).

- b. *dyāvo ná stṛbhiś citayanta*_[PRES.INJ.] *khādīno ví abhríyā ná dyutayanta*_[PRES.INJ.] *vṛṣṭáyah rudró yád...ājani*_[AOR.IND.] (RV II.34.2).

‘With their spangles (the Maruts) looked like_[PRES.INJ.] the heavens with their stars. They **were flashing forth**_[PRES.INJ.] like the rains from the storm clouds, when Rudra had been begotten_[AOR.IND.]’ (tr. mine).

These examples suggest that the Imperfect/Present injunctive was at least *compatible* with the event-in-progress reading, even if it was seldom actually used for this purpose in the text of the *R̥gveda*. In (102a), the Intensive Imperfect *ároravīt* ‘kept bellowing’ is iterative-pluractional as well as progressive, referring to a continual action of bellowing that is ongoing at the assertion time represented by the temporal *yád*-clause, and hence the eventuality time includes the assertion time ($t_E \supset t_A$), which is a presupposition of the progressive interpretation. The Pres. inj. *dyutayanta* ‘were flashing forth’ in (102b) also refers to a repeated (iterative-pluractional) event of flashing forth that is roughly contemporaneous with the stative Pres. inj. *ná...citayanta* ‘looked like’, both of which are ongoing in the past following the birth of the Maruts (and Rudra, their father).

(102b) thus provides an example of the past continuous-state interpretation of the Present injunctive, namely *ná...citayanta* ‘looked like’, which may be thought of as the equivalent of the progressive reading for state predicates (i.e., $t_e \supset t_A$, where *e* is a state rather than an event). Examples of the Imperfect in this function are attested as well (cf. Hollenbaugh 2018:25), which I present in (103). These examples show that the Present injunctive (in (102b)) and Imperfect (in (103)) were compatible with the continuous-state interpretation, again even if the Imperfect/Present injunctive was not actually used to express this meaning very often in the *R̥gveda*.

(103) PAST CONTINUOUS-STATE USES OF THE IMPERFECT

*dāsāpatnīr āhigopā **atiṣṭhan**_[IPF.] nīruddhā_[PA.PART.] āpaḥ paṇīneva gāvah
apām bīlam āpihitam_[PA.PART.] yád **āsīd**_[IPF.] vrtrām jaghanvām āpa tād vavāra* (RV I.32.11).

‘The waters **stood still**_[IPF.]—their husband was the Dāsa; their herdsman, the serpent—**hemmed in**_[PA.PART.] like the cows by the Paṇi.

What **was**_[IPF.] the **hidden**_[PA.PART.] opening for the waters—that Indra uncovered after he smashed Vṛtra.’ (tr. Jamison & Brereton 2014:904).

In (103), the IpF. *āsīt* ‘was’ in the *c*-pāda forms a predicate with the *tá*-participle *āpihitam*, a construction that typically expresses stative meaning (Jamison 1990). This can be taken to refer to a state ongoing in the past, as the property of being ‘the hidden opening for the waters’ is a permanent attribute that lasts right up until Indra ‘uncovered it’ (*āpa tād vavāra*). Moreover, if a change of state had been intended (i.e., an event rather than a state), a form of the verb $\sqrt{bhū}$ ‘become’ was available for use. In the *a*-pāda, there is the IpF. *atiṣṭhan* ‘stood, stayed’, which describes the state of the waters at the time when Vṛtra was guarding them, namely that they were stagnant. Here again is a circumstantial *tá*-participle *nīruddhāḥ*, which may be understood as forming a pseudo-periphrastic construction with *atiṣṭhan*, thus ‘stayed hemmed in’. Moreover, pādas a through c serve to establish the background for the main event that takes place in d, expressed (in emphatic contrast to the Imperfects) by the Perfect *āpa vavāra* ‘he uncovered’. The Imperfects *atiṣṭhan* and *āsīt* can thus be said to serve a “backgrounding” function in the discourse here, which is a cross-linguistically characteristic function of imperfective aspect (Hopper 1982:9).

We may therefore conclude that the Imperfect/Present injunctive in the *Ṛgveda* was compatible with—and was occasionally used to express—interpretations characteristic of imperfective aspect, namely the progressive and continuous-state uses. It may be noted in addition that the Present injunctive could be used not only to refer to eventualities in progress in the past but also, occasionally, in the present, as shown in (104).

(104) PRESENT INJUNCTIVE: PRESENT PROGRESSIVE (a) AND CONTINUOUS-STATE (b)

a. *sadhrīm ā yanti*_[PRES.IND.] pári bībhratīḥ páyo viśvāpsniyāya prá **bharanta**_[PRES.INJ.]

bhójanam (RV II.13.2ab).

‘Toward a common goal they [=the waters] are coming_[PRES.IND.], bringing milk throughout. They **are bringing forth**_[PRES.INJ.] sustenance for him [=Indra?] who is all mother’s milk (for us)’ (tr. adapted from Jamison & Brereton 2014:418).¹⁶⁰

- b. *nítyaś cākanyāt*_[PF.OPT.] *svápatir dāmūnā yásmā u deváh savitá jajāna*_[PF.IND.]
*bhágo vā góbhīr aryamém anajyāt*_[PF.OPT.] *só asmai cāruś chadayad*_[PRES.INJ.] *utá syāt*_[PF.OPT.] (RV X.31.4).

‘Our own proper lord and master of the house [=Agni] should find pleasure_[PF.OPT.] (in the hymn)—(Agni) for whom the god Savitar gave birth_[PF.IND.] (to it). Or Bhaga (and) Aryaman should anoint_[PF.OPT.] it [=hymn] with cows. It [=hymn] **seems**_[PRES.INJ.] dear to him [=Agni] and so it should be_[PRES.OPT.]’ (tr. Jamison 2015–:ad loc, much revised from Jamison & Brereton 2014:1425).¹⁶¹

In (104a), the phrase in the *a*-pāda *ā yanti pári bíbhratīḥ* is emphatically progressive, with the Present tense *ā yanti* ‘they come, are coming’ plus the Present participle *pári bíbhratīḥ* ‘bringing around’, which may act as a loosely periphrastic construction, thus ‘they come bringing around’.¹⁶² If this is the case in the *a*-pāda, it is most likely that the verb of the *b*-pāda refers to the same kind of action, namely something which is ongoing at the present moment.¹⁶³ For this reason I interpret *bharanta* as an event in progress at the present moment (i.e., speech time), thus ‘they are bringing forth’. Further evidence for the present ongoing interpretation of the verbs in (104a) comes from the fact that this verse refers to ritual acts involved in the soma sacrifice (see discussion in Jamison & Brereton’s (2014:417–8) introduction to this hymn), which would have presumably been ongoing in the present moment of the recitation of the hymn. The

160. Cf. similarly *prá...navanta* ‘(flames) are bellowing out’ (RV X.176.1b); *sīdat* ‘is sitting’ (RV X.46.1b).

161. Unless, following Kiparsky (2005:222), we read *chadayat* as optative in meaning, with Pres. opt. *syāt*, thus ‘may it seem and be pleasant to him’. But I find Jamison & Brereton’s (2014:1425) translation more sensible (see discussion below).

162. Cf. similarly RV IV.22.1d: *bibhrad éti* ‘goes on bearing’ (tr. Jamison & Brereton 2014:593).

163. But cf. Jamison (2015–:ad loc.), who comes to the opposite conclusion on the basis of the same evidence: “The pres. part. to the redupl. pres. *bíbhratīḥ* in *a* seems to contrast functionally with the finite injunc. (*prá*) *bharanta* in *b*, with the former expressing the regular, repetitive action of the waters bringing milk, while the latter expresses a one-time or at least notably separate action.”

“flowing, soma-bearing waters of the rite” (Jamison & Brereton 2014:418) are thus described as being in the process of ‘coming’ and ‘bringing forth sustenance’ in the moment that they are actually doing these things.

In (104b), the stative predicate $\sqrt{\text{chand}}$ ‘seem’ appears in the injunctive amid a verse containing three optatives. By Kiparsky’s (1968, 2005) assessment, this injunctive should pick up the modality of the surrounding optatives and so be optative in sense itself, thus ‘may it seem’. Yet the following verb with which *chadayat* is coordinated is the Pres. opt. *syāt*, which must mean ‘may it be’ or ‘it should be’. It makes little sense, to my mind, to say ‘may it both seem dear and (actually) be dear to him’, since the latter typically implies the former, and there is no reason, as far as I can see, to suppose that the hymn’s actually being dear to Agni is in doubt and in need of being distinguished from its only seeming to be dear, or (conversely) that the hymn should need not only to *be* dear to Agni but also to *seem to be* dear to him. Rather, the injunctive here appears to be used for the sake of contrast, its striking morphological difference from the surrounding optatives signaling its distinctive meaning. Jamison & Brereton’s (2014:1425) rendering of it as presential ‘seems’ (i.e., a state ongoing in the present) nicely captures this contrast and yields a coherent meaning: It (the hymn) appears to be dear to Agni (injunctive) and that is the way things ought to be (optative).

Thus we may say that the Present injunctive can have progressive and continuous-state interpretations with present or past reference time, while the Imperfect can have these interpretations with past reference time only.

Finally, I note that the Imperfect/Present injunctive does not appear to attest any secure conative uses in the *R̥gveda*. Though E. Dahl (2010:209–11) cites a couple of examples of Imperfects that he considers to be conative (pp.209–11), neither is necessarily read as such and only one seems to me plausibly conative, namely *prātyahan* in (105), if it means ‘was trying to strike against/pierce’. Such an interpretation, as far as I can see, would require that the action also be iterative-pluractional (‘kept trying to strike’) rather than a single event, and, given the temporal *yád*-clause, it may additionally have an inceptive nuance (‘when he began striking at/trying to strike him, Indra became a horse’s tail’).

(105) POSSIBLE CONATIVE IMPERFECT IN THE *ṚGVEDA*(?)

*áśviyo vāro abhavas tād indra sṛké yāt tvā **pratyáhan** [...] (RV I.32.12ab).*

‘You, Indra, then became the tail of a horse when he **struck** [/was trying to strike(?)] his fangs **at** you’ (tr. Jamison & Brereton 2014:135, interpolation mine).

Yet if *práti√han* means ‘strike *at*’, as Jamison & Brereton (2014:135) render it, then *Vṛtra*’s lack of success in striking Indra with his fangs may be understood as being encoded lexically by the verb–preverb collocation, rather than morphologically. If so, then this example tells us little about whether the Imperfect was compatible with the conative interpretation or not. Moreover, there is every reason to suppose that *Vṛta*, who is a serpent, *did* actually enclose his fangs around Indra when he snapped at him, which is why Indra’s transformation into a horse’s tail is significant. As Jamison explains (p.c.): “When the cobra strikes, its two fangs enclose, but don’t actually hit, the tail; but the strike did take place.” Thus the point seems to be that *Vṛtra* does strike his fangs against Indra, but his strike does not do any damage because Indra becomes a horse’s tail. I therefore conclude that this example does not represent a likely conative use of the Imperfect. There being, to the best of my knowledge, no other plausible examples of this kind, I tentatively assume that the conative use of the Imperfect is unattested in the *Ṛgveda*. There are likewise no conative uses of the Present injunctive, as far as I am aware (and E. Dahl (2010:243–52) cites none). Yet the lack of conative uses of the Imperfect/Present injunctive does not detract from the fact of its compatibility with imperfective interpretations, based on the existence of its progressive and continuous-state readings cited above.

Moreover, there is at least one fairly clear example of a conative Imperfect in Vedic prose, given in (106), where the IpF. *ápābruvan* is built to an accomplishment predicate *ápav√brū* ‘talk away, talk out of, talk down’ which is unsuccessful and so must mean something like ‘tried to talk away, were trying to talk away’.

(106) CONATIVE IMPERFECT IN VEDIC PROSE (*MS*)

*yamó vā amriyata_[IPF.] / té devá yamyá yamám **ápābruvan**_[IPF.] / táṁ yád apṛchant
sābravīd adyāamṛta_[AOR.IND.] iti (MS I.5.12 (81: 2–3)).*

‘Yama died_[IPF.]. The gods **tried to(?) talk**_[IPF.] Yama **away** from Yamī (i.e., make her forget him). (But) when they asked her, she said “Yama died_[AOR.IND.] today.”’ (tr. Jamison

(p.c.)).¹⁶⁴

This example comes from the *Maitrāyaṇī Saṃhitā* (MS), which, though linguistically and chronologically later than the *Ṛgveda*, is the earliest Vedic prose we have aside from the prose portions of the *Atharvaveda*. In any case, it is unlikely that the Imperfect was incompatible with this reading in Ṛgvedic grammar and became capable of expressing conative meaning by the time of Vedic prose. More likely is that the Imperfect was always compatible with a conative interpretation but unambiguous examples in the *Ṛgveda* have so far eluded us. Note that (106) is remarkable not only for its conative Imperfect, but also for the contrastive use of the plain narrative Ipf. *amriyata* ‘died’ and the recent-past/resultative Aor. ind. *amṛta* ‘(just) died’ in Yamī’s quoted speech.

In RV II, there are up to 4 imperfective uses of the Imperfect, out of a total of 148 Imperfects/Present injunctives (3%). Of these, only 1 is securely interpreted, out of 121 securely interpreted Imperfects/Present injunctives overall (0.8%). 3 are progressive (75%) and 1 is past stative (25%). 1 is augmented (25%) and 3 are injunctive (25%). Of the progressives, 1 is augmented (33%), the other 2 are injunctive (67%). The stative example is injunctive. All are past in reference (75%) except the presential progressive injunctive cited in (104a) above (25%). The imperfective Imperfects/Present injunctives account for up to 3% of indicatival uses of the Imperfect/Present injunctive (out of 129). The imperfective injunctives represent 8% of the total injunctives in RV II (out of 40) and 14% of the indicatival injunctives (out of 21). The 1 imperfective Imperfect indicative represents 0.9% of all Imperfects (out of 108).

On the whole, we may conclude that, though the Imperfect/Present injunctive is compatible with imperfective interpretations, it is only used in these senses extremely rarely. The fact that finite forms are so rarely used to convey past imperfective meaning is probably related to Vedic’s preference for non-finite forms in this function. Given that none of the finite forms are specified for imperfective meaning (at most they are compatible with it), the non-finite forms are used

164. Prof. Jamison brought this example to my attention after happening upon a note in the copy of Lanman’s *Sanskrit Reader* that had belonged to her late husband Calvert Watkins. Next to *āpābruvan*, which occurs in Lanman’s selection LXIII, Watkins had written “‘conative imperfect’ – unfinished action.”

instead.¹⁶⁵ R̥gvedic examples of the Present participle in this function include (nominative) *yodhó mányamānaḥ* ‘thinking himself a fighter’ (*RV* VI.25.5b) and (accusative) *ámartyam... mányamānam* ‘thinking himself immortal’ (*RV* II.11.2c). Such participles may also be predicated in a kind of periphrastic construction, acting as the main verbs in their clause, as at *RV* V.32.3c: *yá éka íd apratír mányamānaḥ* ‘who was thinking himself unopposable even on his own’ (tr. Jamison & Brereton 2014:697; cf. Hollenbaugh 2018:27). The same applies to present time reference as well, as can be seen in (97) and (107b) (also *RV* II.11.4b and 11.13b, among many others).

Despite its scarcity, the very fact of the Imperfect/Present injunctive’s compatibility with imperfective readings is significant, particularly when taken in consideration with the fact that the Aorist lacks imperfective usage entirely. This suggests that the Imperfect is not restricted to just terminative usage but can have both terminative and imperfective interpretations. Typologically speaking, preterites that can have both terminative and imperfective interpretations are called simple past tenses (Bybee et al. 1994:82–5) and are generally taken to be neutral as regards aspect (Smith 1997:77–81; Grønn 2004; E. Dahl 2010:88), such that the eventuality time need only overlap with assertion time ($t_E \circ t_A$), meaning that essentially any aspectual interpretation is possible. Remarkably, Whitney (1889:278) seems to have something like this in mind when he says that the Imperfect “is the tense of narration; it expresses simple past time, without any other implication.” So, though Whitney (1889:201) rightly points out that the Imperfect does not *express* “imperfect time” per se, in the sense that its use does not entail, nor even implicate, imperfective meaning, this does not mean that the Imperfect is *incapable* of having these meanings; it simply had no other “implication” other than past tense.

165. This trait is shared to some extent by Homeric, which often uses participles to express imperfective (and counter-sequential) meaning, though in Homer the finite Imperfect is also fairly common in this use.

10.2 “Perfect-like” readings of the Present injunctive/Imperfect: Examples & frequency

3, 5. RESULTATIVE AND COUNTER-SEQUENTIAL IMPERFECT[/PRESENT INJUNCTIVE?]: Due to the scarcity of these readings, I will treat the present-referring and counter-sequential resultative uses together. As in Homer, the Imperfect can occasionally be used in a present resultative sense, where the Aorist would typically be expected. Most often such uses occur when an Aorist is lacking from the paradigm of the verb being used. This can be the case for certain roots that do not build Aorist stems at all, or for derived conjugations that are definitionally Present stems, as in the case of denominatives, desideratives, or intensives. The Present stem is sometimes used in resultative contexts even where Aorist equivalents are possible. In (107a), the IpF. *āyam* ‘I have come here’ is built to the root \sqrt{i} ‘go’, which does not build an Aorist stem. The Imperfect is thus used in what appears to be a resultative function, even though the words \sqrt{gam} and $\sqrt{gā}$ ‘go, come’ have Aorists that, in principle, could have been used instead.¹⁶⁶ Likewise in (107b), the -āya-IpF. *āvardhayaḥ* ‘you have strengthened’ is used despite the existence of the reduplicated Aor. *avīṛdha-* in the *Rgveda*.

(107) RESULTATIVE IMPERFECT: PRESENT TIME REFERENCE

- a. *āyam*_[IPF.] *adyā* *sukṛtam* *prātār ichānn iṣṭēḥ putrām vāsumatā rāthena*
*aṃśóḥ sutám pāyaya*_[PRES.IPV.] *matsaráśya kṣayádvīraṃ vardhaya*_[PRES.IPV.]
sūnṛtābhiḥ (RV I.125.3).
 ‘[The early-comer:] “I **have come here**_[IPF.] today early in the morning with a goods-filled chariot, seeking one who performs (sacrifice) well, the son of my seeking. Make (Indra?) drink_[PRES.IPV.] the pressed (soma) of the exhilarating plant; strengthen_[PRES.IPV.] the hero-ruling (Indra?) with liberal gifts”’ (tr. Jamison & Brereton 2014:290).
- b. *vyāntu*_[PRES.IPV.] *ín nú yēsu mandasānás*_[PRES.PART.] *trpát sómam pāhi drahyád indra*
*asmán sú pṛtsu á tarutra āvardhayo*_[IPF.] *dyām bṛhádḥbir arkaīḥ* (RV II.11.15).

166. However, it is not clear what exactly motivates the use of \sqrt{i} versus $\sqrt{gam}/\sqrt{gā}$ in general, so assuming that the Aorist to \sqrt{gam} or $\sqrt{gā}$ could furnish a resultative to \sqrt{i} is by no means certain.

‘Right now let just those (soma juices) pursue_[PRES.IPV.] you—those among whom (you) are becoming exhilarated_[PRES.PART.]. Steadfastly drink_[AOR.IPV.] our soma to your satisfaction, Indra.

(Strengthen) us well in battles, o surpassing one. You **have strengthened**_[IPF.] heaven through lofty chants’ (tr. adapted Jamison & Brereton 2014:415, after Jamison 2015–:ad loc.).

Still other examples occur to verbs that have readily available Aorists and/or Perfects, in which it is difficult to understand why the Imperfect was selected to convey a recent-past/resultative meaning (e.g., *abhavat* ‘has become’ at RV VII.104.21a, on which see Jamison’s (2015–) commentary ad loc.; similarly *ā...ābhavaḥ* ‘here you have come’ at III.1.17a). In any case, given the highly presential nature of the verses in (107), containing imperatives and (in (107b)) a predicated Present participle, Jamison & Brereton’s (2014:290, 415) translation of the Imperfects as present-referring resultatives ‘I have come here’ and ‘you have strengthened’ seems appropriate (but cf. E. Dahl 2010:189–90). The Imperfect may thus be said to be compatible with present resultative usage, even if it is not the preferred form in this meaning (the preferred form being the Aorist).¹⁶⁷

The Imperfect in its resultative function is more frequently found in contexts of past time reference, which is to say counter-sequential (a usage it again shares with Homer), as seen in (108).¹⁶⁸

(108) RESULTATIVE IMPERFECT: COUNTER-SEQUENTIAL

- a. *abhinākṣanto abhí yé tám ānaśúr nidhím paṇīnām paramām gúhā hitám*
*té vidvāṃsaḥ praticákṣyānr̥tā púnar yáta u áyan*_[IPF.] *tád úd īyur*_[PF.IND.] *āvísam* (RV II.24.6).

‘These knowing (poets), who, upon reaching (there), reached the Paṇis’ most distant treasury, hidden away,

167. Another likely example of a present-referring resultative Imperfect is *anayanta* ‘they have led’ at RV I.141.1d (so Jamison & Brereton 2014:316) and perhaps again at RV V.45.10cd, if it has the same time reference as the two Aorists that precede.

168. Still, it seems that Vedic prefers non-finite forms in this function overall, on which see n.133 above.

after observing the (Panis') untruths again, went up_[PF,IND.] to enter there from where they **had come**_[IPF.] ' (tr. adapted from Jamison & Brereton 2014:436).

- b. *ádḥā yó víśvā bhúvanābhí majmánā īśānakṛt prāvayā **abhy ávardhata***_[IPF.]
*ád ródasī jyótiṣā váhnir átānot*_[IPF.] *sīvyān támāṃsi dúdhitā sám avyayat*_[IPF.] (RV II.17.4).

'Then he who **had grown strong**_[IPF.] **over** all the worlds by his greatness, acting as their master, projecting his youthful vitality,
after that, (becoming a) draft-horse, he spanned_[IPF.] the two world-halves with light; upon sewing up the bilious shades of darkness, he wrapped_[IPF.] them all together' (tr. adapted from Jamison & Brereton 2014:425).

In (108a), the IpF. *áyan* is used in a subordinate clause dependent on a past-tense verb, the Pf. ind. *úd īyuh* 'they went up', which the action of *áyan* logically precedes, hence 'they had come'. The Perfect and Imperfect to the same verb \sqrt{i} 'go' are used contrastively, the Perfect in its typical past terminative value and the Imperfect in an anterior (counter-sequential) function. Though an Aorist would ordinarily be expected in the counter-sequential function in a subordinate clause, the root \sqrt{i} lacks an Aorist stem, and the desire to use the same verb in contrast in both clauses probably explains why the Aorist of \sqrt{gam} or $\sqrt{gā}$ 'go, come' was not used in its place. Yet it is interesting that the Perfect was used for past terminative meaning instead of the Imperfect, and that the Imperfect, not the Perfect, should be selected to express anteriority. This makes sense, however, if we consider the alternative: The Perfect indicative is not typically used in a counter-sequential function in subordinate clauses, only the Pluperfect (and that only rarely, cf. (86a) below). Therefore, if the speaker wishes to use the same root in both clauses, the only means of expressing anteriority in the subordinate clause is with the Imperfect. The Imperfect could, in principle, also have been used in the main clause, but then there would be no formal contrast between them (aside from accent). To maximize contrast between forms, reflecting their contrasting functions, the speaker uses the only other option available for expressing past terminative meaning in the main clause, namely the Perfect. In (108b) the Imperfects in the main clauses are explicitly stated to follow (*āt* 'then, after that') the action of the Imperfect in the dependent clause. It is surprising that the Aorist *avṛdha-* was not used, though

aside from the participle this only occurs in the active voice (Ipf. *ávardhata* is mediopassive) and only once in the *R̥gveda* (IV.23.1a).

The Imperfect may be used in independent clauses in the counter-sequential function as well, as at *RV* X.133.2ab (see E. Dahl 2010:195–201 for discussion and further citations). Two more examples of counter-sequential Imperfects in dependent clauses are cited by E. Dahl (2010:199–201). The first is *ávartayat* (*RV* I.85.9b), which appears in a temporal *yád*-clause in the meaning ‘when he had turned’ (so too Jamison & Brereton 2014:215). The other is *ávidhyat* (*RV* V.40.9b) in a relative clause meaning ‘which he had pierced’. Note that the root \sqrt{vyadh} ‘pierce’ lacks an Aorist stem in Vedic.¹⁶⁹

The Imperfect thus appears to be compatible with counter-sequential resultative interpretation as well as present-referring resultative interpretation, at least to verbs or verbal bases that lack a viable Aorist as part of their regular paradigm (and perhaps even in some cases where there is such an Aorist available). The Present injunctive *might* have a counter-sequential value in some cases, such as (109), but it is difficult to be certain about the sequencing of events in the *R̥gveda* and no instances of the Present injunctive known to me can be said to be counter-sequential with any confidence.

(109) COUNTER-SEQUENTIAL PRESENT INJUNCTIVE(?)

*ádardar*_[IPF.] *útsam ásrjo ví khāni tvám arṇavān badbadhānāñ aramṇāḥ*
*mahāntam indra párvatam ví yád váḥ srjō*_[PRES.INJ.] *ví dhārā áva dānavām han*_[PRES.INJ.]
(RV V.32.1*).*

‘You violently split_[IPF.] [or ‘shattered apart’] the wellspring; you reamed out its apertures. You brought to peace the floods, which had been hard pressed.
 When, Indra, you pried apart the great mountain, you set loose_[PRES.INJ.] the streams; you **[had?] smashed down**_[PRES.INJ.] the Dānava.’ (tr. Jamison & Brereton 2014:697, interpolation mine).

Strictly speaking, the smashing of “the Dānava” (= Vṛtra) precedes the releasing of the streams

169. A further motivation for the use of this verb here, pointed out to be by Prof. Jamison (p.c.), is that the opening sentence of the Svarbhānu myth almost universally has the verb *avidhyat* ‘pierced’ (see Jamison 1997:128–9). In *RV* V.40.9b we have a quote (transformed into a subordinate clause) of the incipit of the myth (which is a main clause).

in the myth of Indra's battle with Vṛtra (cf. *RV* I.32.1bc and IV.28.1c, though X.133.2ab has the same order of events as in (109)). So under a linear conception of storytelling (which the *R̥gveda* does not necessarily always adhere to) the event referred to by the Pres. inj. *áva han* 'had smashed down' is counter-sequential in that it does not advance the narrative but takes it a step back, to the event that preceded the event of the previous clause (cf. E. Dahl 2010:195–201 for a discussion of Imperfects used in this way).

It remains only to investigate the Present injunctive in present resultative value. E. Dahl (2010) cites none, and I am aware of none.¹⁷⁰ The apparent lack of Present injunctives in present resultative function makes sense when we recall that the Aorist in this function also prefers to be augmented. Recall that the augment helps speech act participants adjudicate between possible alternative interpretations that the injunctive forms might have when the reference time is present. This is typically not an issue for the Imperfect, since it does not usually have present reference. But when it does, the speaker needs to make clear that some non-indicative interpretation is not intended, such that the interpretation as present resultative will be recoverable to the addressee. Recall also that the augmentless forms of the Aorist in present resultative value, while attested, are much rarer than the augmented ones. Given that the resultative use of the Imperfect is scarce to begin with, and given the motivation speakers had to avoid augmentless forms in resultative contexts, it is not surprising that we do not find any resultative Present injunctives in the whole of the *R̥gveda*.

In *RV* II there are 3 resultative Imperfects, accounting for 3% of all Imperfects (out of 108). 2 of these are securely augmented (67%), and 1 is securely interpreted (1% of all securely interpreted Imperfects). 2 are counter-sequential (67%), of which 1 is securely interpreted and securely augmented. 1 is a present-referring resultative (33%), which is securely augmented but not securely interpreted. Together, the resultative uses account for up to 75% of the "perfect-like" uses of the Imperfect in *RV* II (3 out of 4).

4. EXPERIENTIAL PRESENT INJUNCTIVE(?): Hoffmann (1967:167–8) describes an 'attributive' or

170. One possible example is *próthad* at *RV* VII.3.2a, if Jamison & Brereton's (2014:886) translation of it as 'He has snorted' is correct. Yet it seems to me more likely that the injunctive here is presential, matching the two indicative Presents that follow in 2cd, an interpretation with which Prof. Jamison agrees (p.c.).

‘characteristic’ use of the injunctive (“Beeigenschaftung”), which resembles the experiential use in that it ascribes some lasting quality to a person on the basis of what they have done in the past. One of his examples is (110).

(110) EXPERIENTIAL PRESENT INJUNCTIVE(?)

*sanéma té 'vasā návyā indra prá pūrāva stavanta_[PRES.IND.] enā yajñāiḥ
saptá yát púraḥ śárma śāradīr dárd_[AOR.INJ.] **dhán**_[PRES.INJ.] dāsīḥ purukútsāya śíkṣan* (RV VI.20.10).

‘Might we win anew through your help, Indra. The Pūrus praise_[PRES.IND.] him with sacrifices for this (reason)

that [or ‘because’] he has split_[AOR.INJ.] the seven autumnal strongholds, their shelter; he **has slain**_[PRES.INJ.] the Dāsa (clans), doing his best for Purukutsa’ (tr. partially adapted from Jamison & Brereton 2014:436, cd after Hoffmann 1967:168).

However, rather than having anything to do with aspect, Hoffmann (1967:167–8) attributes this usage to the injunctive itself, citing both Aorist and Present examples. But in my view the injunctive cannot exhibit an aspectual use with which the verbal base is incompatible. So even if experiential readings are found only in the injunctive, it follows from this that the Present stem is at least *compatible* with the experiential perfect interpretation. That said, this is an extremely dubious usage, and every one of Hoffmann’s (1967:167–8) examples admits of alternative interpretations.

In some instances, the Imperfect seems to have a somewhat similar function. These cannot be read as experiential *per se*, in that they are not translatable with the English present Perfect, but rather refer to a past event as the cause of something relevant to the present moment. These may be compared to the use of the past Imperfective in Russian, which is used in contexts where the result state no longer persists but the consequences of a past event have current relevance, as in the famous example *Kto otkryval okno?* ‘Who opened the window?’ or better ‘Who had the window open?’ when asked by someone who, for instance, notices that the room is cold but the window is no longer open (see, e.g., Grønn 2007). (Were the window still open the speaker would typically use the Perfective instead, in its resultative sense: *Kto otkryl okno?* ‘Who has opened the window?’) The Imperfect in the *R̥gveda* may, it seems, be used similarly and is especially

common in reference to Agni.¹⁷¹ I provide an example in (111) (cf. also (112b) below).

(111) IMPERFECT OF A CURRENTLY RELEVANT PAST EVENT

*dadhanvé_[PF,IND.] vā yád īm ánu vócad_[AOR.INJ.] bráhmāṇi vér_[PRES.INJ.] u tát
pári víśvāni káviyā nemís cakráṁ iva **abhavat**_[IPE]* (RV II.5.3).

‘When he has run after_[PF,IND.] it, he speaks_[AOR.INJ.] sacred formulations [*bráhmāṇi*] and
pursues_[AOR.INJ.] this (office of Brahman-priest):

he **encompassed**_[IPE] all poetic skills, like a felly a wheel’ (tr. partially adapted from Jamison & Brereton 2014:436, after Jamison 2015–:ad loc.).

Jamison (2015–:ad loc.) suggests in her *R̥gveda* commentary (on the basis of our discussion of this passage) that “cd describes Agni’s acquisition of poetic skills in the past – he is elsewhere often called a *kaví*- – which allows him to assume the role of Formulator now.” Thus, the Imperfect in cd is related to the present moment referred to by the verbs in ab, citing a fact about Agni’s past as it pertains to his present situation.¹⁷²

The examples above, insofar as they tell us anything, may be taken as evidence in support of the compatibility of the Imperfect/Present injunctive—realized under certain circumstances—with present time reference in meanings resembling the experiential perfect reading. But, as I have tried to emphasize, the evidence as regards the experiential use is shaky at best, and the better evidence for the compatibility of the Imperfect/Present injunctive with “perfect-like” interpretations comes from the preceding (resultative/counter-sequential) and following (universal) items.

There are no examples of an experiential Present injunctive in RV II, though the Imperfect is used of a currently relevant past event at least 5 times (cf. (111) and n.171 above), representing about 5% of the uses of the Imperfect (out of 108). I do not count these among the “perfect-like” uses of the Imperfect however.

171. Other possible examples include: RV I.68.10; II.4.5b, 11.18b, 28.4a, 33.13c; V.79.1c; VI.5.3b (in (112b) below); X.8.4b.

172. It should be noted, however, that in this particular example there is no consensus even about the clausal distribution of the verbs in this verse, so their functions cannot be identified with any certainty. See Jamison 2015–:ad loc. for discussion of the many problems and ways of reading the verbs in this verse.

6. UNIVERSAL IMPERFECT/PRESENT INJUNCTIVE: The Imperfect/Present injunctive is in a few cases used in what seems to be a universal perfect function. Unlike Homer, where the universal Imperfect may have past or present reference ('had been doing such-and-such' or 'have been doing such-and-such', cf. §5.2 above), in the *R̥gveda* only the present-referring variety appears to be attested, as exemplified in (112).

(112) UNIVERSAL IMPERFECT (a) AND PRESENT INJUNCTIVE (b)

a. *púnah sám avyad*_[AOR.IND.] *vítataṃ váyantī madhyá kártor ní adhāc*_[AOR.IND.] *chákma dhírah*

*út samháya asthād*_[AOR.IND.] *ví r̥túṃr adardhar*_[IPF.] *arámatih savitā devā āgāt*_[AOR.IND.] (RV II.38.4).

'Once again the weaver has wrapped up_[AOR.IND.] what was stretched out; in the middle of his work the mindful (worker) has set down_[AOR.IND.] his craft. Having pulled himself together, he [=Savitar] has stood up_[AOR.IND.]. He **has always kept**_[IPF.] the seasons **separate**. As Proper Thinking, god Savitar has come_[AOR.IND.]' (tr. Jamison & Brereton 2014:457).

b. *tvāṃ vikṣú pradīvaḥ sīda*_[PRES.INJ.] *āsú krátvā rathār abhavo*_[IPF.] *vāryāṇām āta*_[PRES.IND.] *inoṣi vidhaté cikitvo vy ānuṣág jātavedo vásūni* (RV VI.5.3).

'You **have been sitting**_[PRES.INJ.] among these clans here from olden days; by your will you became_[IPF.] charioteer of valuables.

Therefore you send_[PRES.IND.] goods in due order to him who does (you) honor, o observant Jātavedas' (tr. adapted from Jamison & Brereton 2014:778).

In (112a) the Intensive IpF. *ví adardhar* 'repeatedly/regularly kept apart' (built to the state predicate *ví√dhr̥* 'hold or keep apart') appears amid a sea of indicative Aorists, which all have present reference. It therefore makes sense to read *ví adardhar* as present referring as well. Recall that, as in Homer, the Imperfect/Present injunctive can sometimes be seen as "filling in" for the Aorist, especially when no Aorist exists in a particular paradigm. Since *adardhar* is built to an Intensive stem, which categorically lacks an Aorist form (as well as a Perfect), the only option available to one wishing to use an Intensive in a context of present reference is the Imperfect. The reading seems to be universal, rather than resultative, since the god Savitar's separating of

the seasons is not the result of a single event whose result is still in effect, but rather a constantly recurring state of affairs that he maintains, and has always maintained (hence Jamison & Brereton's (2014:457) 'always'; see under this verse in Jamison's (2015–) commentary). The Intensive seems to be used here, among the Aorists, in order to convey this effect of repetition (cf. (102a) above), as discussed by Schaeffer (1994:140–1).¹⁷³ Because the Intensive Imperfect is a kind of Imperfect, we may conclude that the Imperfect is compatible with the universal interpretation.

In (112b) the Pres. inj. *sīdah* 'you sat' is modified by the adverb *pradīvaḥ* 'from of old, from time immemorial, long since', which specifies that the eventuality began some time in the remote past and has held either continuously or (more likely) at regular intervals over the span of the assertion time that includes the present moment ($t_A \supset t_0$). In the *b*-pāda, an event belonging to that remote past time is referred to in the Imperfect (*abhavaḥ* 'you became'), presumably for reasons similar to (111) above, as an event belonging to Agni's distant past is here relevant to his present situation, which is referred to in cd (*ātas* + Pres. inj. *inoṣi* 'therefore you send').

If, in contrast to Homer, a past universal use of the Imperfect/Present injunctive is unattested in the *Ṛgveda*, this is not necessarily surprising, given that Vedic seems to prefer non-finite forms for indicating the universal perfect meaning in the past (cf. similarly non-finite forms in counter-sequential and imperfective functions, discussed in n.133 and §10.1 above). These include Present participles, as at *RV* V.32.1b seen in (109) above and (113a) below, as well as Perfect participles (e.g., *RV* IV.16.7a) and, if the predicate is a state, past participles in *-tá-* (e.g., *RV* IV.45.2c, VI.17.12ab). Recall that the universal perfect meaning may be equally well expressed by the present tense or imperfective aspect cross-linguistically (as in Greek and many other languages), so it is no surprise to find these participles being used in this function. I assume that their use in such contexts regularly blocks the application of the finite forms in universal functions.

In sum, we may conclude that the Imperfect/Present injunctive is compatible with the universal perfect interpretation, thus furnishing further evidence that the Imperfect/Present in-

173. She says that *ádardhar* "bezieht sich nicht auf die unmittelbar vorangegangene Handlung des Gottes, sondern nennt eine Tätigkeit, die er von alters vollbracht hat; die Funktion des Intensivums dürfte eine kontinuitive sein: 'sich aufraffend ist er aufgestanden; (fortwährend) hielt er die Jahreszeiten auseinander; bereiten Sinnes ist der Gott Savitr gekommen.'"

junctive was compatible with “perfect-like” interpretations in general (i.e., along with the resultative and, possibly, experiential uses).¹⁷⁴ Taken together with the fact that it may express imperfective and terminative meanings, this contributes to our understanding of the Imperfect/Present injunctive as aspectually neutral ($t_E \circ t_A$) and therefore compatible with any kind of aspectual interpretation.

The universal interpretation of the Imperfect/Present injunctive occurs just 1 time in *RV II*, accounting for 0.7% of all Imperfects/Present injunctives. It is a securely augmented Imperfect and is securely interpreted, accounting for 0.9% of all Imperfects and 1% of those that are securely interpreted. This represents 25% of the “perfect-like” uses of the Imperfect in *RV II* (1 out of 4).

10.3 Terminative readings of the Present injunctive/Imperfect: Examples & frequency

7. CONCENTRATIVE-SEQUENTIAL IMPERFECT/PRESENT INJUNCTIVE: The past concentrative-sequential reading is by far the most common use of both the Imperfect and the Present injunctive, accounting for some 76% of all Imperfect/Present injunctive uses (112 out of 148). The nearest competitor is the gnomic use (Present injunctive only) at just 7% of Imperfects/Present injunctives (11 out of 148) or 28% of Present injunctives. The concentrative Imperfect is most typically used to sequence events chronologically in past narration—or rather, what most closely resembles narration in the *R̥gveda*, consisting of a series of past events but often not very many in a row, fluctuating abruptly between narrative and non-narrative. Nonetheless, the us-

174. Given what was just said about the universal reading being compatible with imperfective aspect cross-linguistically, the universal readings of the Imperfect/Present injunctive might alternatively be taken as further evidence of its compatibility with imperfective meaning. This would not affect the general conclusion about the Imperfect/Present injunctive, however, that it is neutral in aspect. Yet I regard the universal Imperfect as a “perfect-like” use, rather than an imperfective one, due to the fact that the universal reading cross-linguistically tends to pattern with present tenses or with present-referring (or untensed) imperfectives, not typically with past imperfectives. The universal perfect reading is, however, available to simple past tenses cross-linguistically, as in Middle English (cf. Fischer 1992:245). Since the Imperfect seems to function as a simple past tense, I assume that its universal use is derived from that meaning (i.e., past tense + neutral aspect), thus aligning with the “perfect-like” uses rather than the imperfective ones. For the Present injunctive, on the other hand, I see no way of deciding between these alternatives (nor much reason to do so).

age is clear and robust, and is well documented in the grammatical literature (cf. n.112 above for references). I provide examples of the Imperfect and Present injunctive in their concentrative-sequential functions in (113).

(113) CONCENTRATIVE-SEQUENTIAL IMPERFECT AND PRESENT INJUNCTIVE

- a. *ádardar*_[IPF.] *útsam ásrjo ví*_[IPF.] *khāni tvám arṇavān badbadhānām* *aramñāh*_[IPF.]
*mahāntam indra párvataṃ ví yád vāh*_[AOR.INJ.] *sfjó ví*_[PRES.INJ.] *dhārā áva dānavām*
*han*_[PRES.INJ.] (RV V.32.1).

‘You **violently split**_[IPF.] the wellspring; you **reamed out**_[IPF.] its apertures. You **brought to peace**_[IPF.] the floods, which had been hard pressed.

When, Indra, you **pried apart**_[AOR.INJ.] the great mountain, you **set loose**_[PRES.INJ.] the streams; you **smashed down**_[PRES.INJ.] the Dānava.’ (tr. Jamison & Brereton 2014:697).

- b. *tán nú satyám pávamānasyāstu yātra víśve kārāvaḥ saṃnāsanta*
*jyótir yád áhne ákrñod*_[IPF.] *ulokám právan*_[IPF.] *mānuṃ dásyave kar*_[AOR.INJ.]
abhīkam (RV IX.92.5).

‘Now, let this be true of the self-purifying one, this on which all the bards concur: that he **made**_[IPF.] light for the day and wide space; he **furthered**_[IPF.] Manu but **made**_[AOR.INJ.] close quarters for the Dasyu’ (tr. Jamison & Brereton 2014:1331).

Note that the Imperfect and Present injunctive are often intermingled in a single narrative (or micro-narrative) sequence, and often co-occur with the Aorist injunctive in the same function, as they do in these examples.

Not all concentrative uses of the Imperfect/Present injunctive are necessarily sequential, as can be seen from the isolated Imperfect in the refrain *yás tá ákrñoh prathamām sāsī ukthíyaḥ* ‘You, the one who **did** these things first, are worthy of hymns’ (RV II.13.2d, 3d, 4d; tr. Jamison & Brereton 2014:418).

As mentioned above, up to 112 of the 148 Imperfects/Present injunctives in RV II are concentrative (76%), 101 being securely interpreted (83% of all 121 securely interpreted Imperfects/Present injunctives). Of these, 95 are Imperfects (85% of the total 112), accounting for 88% of all Imperfects (out of 108), 91% of those that are securely interpreted and securely augmented (84 out of 92). The remaining 17 are injunctive (15%), accounting for 43% of all Present

injunctives (out of 40), 50% of those that are securely interpreted and securely augmentless (12 out of 24).

Looking only at the indicative uses of the Imperfect/Present injunctive, the concentrative uses account for 87% of the total (112 out of 129). The concentrative injunctives account for 81% of the injunctives used indicatively in *RV* II (17 out of 21) and 100% of those that are securely interpreted and securely augmentless (12 out of 12).

The concentrative uses account for 93% of the past terminative readings of the Imperfect/Present injunctive in *RV* II (112 out of 121), 95% of those that are securely interpreted (101 out of 106). The concentrative Imperfects represent 92% of the terminative Imperfects (95 out of 103), while the concentrative Present injunctives represent 94% of the terminative Present injunctives (17 out of 18). Its abundant concentrative-sequential uses thus provide the strongest evidence that the Imperfect/Present injunctive is compatible with terminative meaning ($t_E \subseteq t_A$).

8. COMPLEXIVE IMPERFECT/PRESENT INJUNCTIVE: When built to atelic predicates, the Imperfect/Present injunctive occasionally has a complexive reading, which is to say a past terminative interpretation such that the assertion time interval is coextensive with the eventuality time interval ($t_E = t_A$). I provide examples of the Imperfect in this function in (114). Though in (114c) the ‘months’ are not explicitly quantified, this verse refers to the same Sattrā sacrifice as in (114a), held by the Aṅgīrasas besieging the Vala cave, which was “a months-long ritual” (Jamison 2015–:ad loc. with further references).

(114) COMPLEXIVE IMPERFECT

- a. *ánūnod*_[AOR.IND.] *átra hástayato ádrir árcan*_[IPE.] *yéna dáśa māsó návagvāḥ* (*RV* V.45.7ab).

‘The (pressing) stone, guided by the hand, bellowed_[AOR.IND.] there, the stone along with which the Navagvas **sang**_[IPE.] for ten months’ (tr. Jamison & Brereton 2014:719).

- b. *yád vírūpā ácaram*_[IPE.] *mártiyeṣu ávasam*_[IPE.] *rātrīḥ śarádaś cátasrah*
*ghrtásya stokām sakṣd áhna āśnām*_[IPE.] *tād evédām tātrpāṇā carāmi* (*RV* X.95.16).

‘When in different form I **roamed**_[IPE.] among mortals and **spent**_[IPE.] **the nights** (with

you?) for four autumns,

once a day I ate_[IPF.] a drop of ghee. Just from that I continue to be sated now' (tr. Jamison & Brereton 2014:1550).

- c. *idāṃ cin nú sádanam bhūry eṣāṃ yéna māsāṃ ásiṣāsann_[IPF.] ṛténa* (RV III.31.9cd).
'Just this was their long Session, by which, for months, they **sought to win**_[IPF.] (the cows) through truth' (tr. Jamison & Brereton 2014:509).

Examples of the complexive Present injunctive are presented in (115), though the form of the verb in (115b) is problematic (see discussion in Jamison's (2015–) *Ṛgveda* commentary ad loc.).

(115) COMPLEXIVE PRESENT INJUNCTIVE

- a. *duvādaśa dyūn yád ágohiyasya atithyé rāṇann_[PRES.INJ.] ṛbhávaḥ sasántaḥ
sukṣétrā akṛṇvann_[IPF.] ánayanta síndhūn dhánva átisthann_[IPF.] óṣadhīr nimnám
ápah* (RV IV.33.7).

'When the Ṛbhus **enjoyed**_[PRES.INJ.] the hospitality of Agohya for twelve days, sleeping (there),

(then) they made_[IPF.] the fields good and led the rivers; plants arose_[IPF.] upon the dry land and waters upon the low ground.' (tr. Jamison & Brereton 2014:611).

- b. *tisró yád agne śarādas tvām íc śúcimḥ ghrténa śúcayaḥ saparyān_{[PRES.INJ.?)}
nāmāni cid dadhire_[PF.IND.] yajñíyāni ásūdayanta_[IPF.] tanvāḥ sújātāḥ* (RV I.72.3).

'Since, o Agni, for three autumns they [=gods?] **served**_{[PRES.INJ.?)} just you, the glowing one, with ghee—themselves glowing—

they also acquired_[PF.IND.] names worthy of worship and, well-born, they sweetened_[IPF.] their own bodies' (tr. Jamison & Brereton 2014:197).

In all of the examples in (114) and (115) an adverbial phrase referring to a definite time interval specifies the assertion time, with which the eventuality referred to by the verb in the Imperfect/Present injunctive is coextensive ($t_E = t_A$).

The complexive interpretation is found up to 3 times in RV II (2% of all Imperfects/Present injunctives), or 2% of all indicational Imperfects/Present injunctives (out of 129). However, none

are securely interpreted, due to the fact that these 3 examples lack the kinds of clear, quantified adverbial phrases found in (114) and (115) above. Of these, 2 are Imperfect (67%) and 1 is Present injunctive (33%). The complexive Imperfects make up 2% of all Imperfects (out of 108); the Present injunctive accounts for 3% of all Present injunctives (out of 40) or 5% of all indicational injunctives (out of 21). The complexive Imperfect/Present injunctive overall accounts for 2% of past terminative uses (3 out of 121), 2% among Imperfects (2 out of 103) and 6% among Present injunctives (1 out of 18).

The complexive interpretation of the Ṛgvedic Imperfect/Present injunctive recalls Homeric, in which the Imperfect is the regular way of expressing this meaning. It is significant that in the *Ṛgveda*, as far as I have been able to find, all verbs modified by definite time adverbials of the type in (114) and (115) are in the Imperfect or, at least once, in the Perfect (see (127) below), never the Aorist. In Homer, the complexive use of the Aorist (§4.2) is extremely rare and doubtfully attested (though it is frequent in post-Homeric Greek), whereas the Imperfect (§5.3) is commonly found in this function. As in Homeric, the Ṛgvedic Imperfect/Present injunctive must have been semantically broad enough to accommodate the complexive reading, while the denotation of the Aorist forbids its application in this function.

9. INCEPTIVE IMPERFECT: The Imperfect sometimes refers to the initiation of an eventuality. This inceptive use is exemplified in (116). For further examples and discussion see E. Dahl 2010:206–9.

(116) INCEPTIVE IMPERFECT

a. *yó hatvá áhim áriṇāt saptá síndhūn* (RV II.12.3a).

‘Who, having smashed the serpent, **let flow** the seven rivers’ (tr. Jamison & Brereton 2014:416).

b. *prāti śroná sthād*_[AOR.INJ.] *ví anág acaṣṭa*_[IPE.] (RV II.15.7c).

‘The lame one stood firm_[AOR.INJ.] [i.e., began standing]; the blind one **saw clearly**_[IPE.] [i.e., started seeing]’ (tr. adapted from Jamison & Brereton 2014:422).

In (116a), the Imperfect *áriṇāt* ‘let low, made start to flow’, built to the root $\sqrt{rī}$ ‘flow’, refers to the release of the waters following the smashing of the serpent. On (116b) see my discussion of

(89) above.

The Present injunctive may be inceptive as well, at least in its gnomic function, as *riṇánn apáh* at *RV* VIII.7.28c: ‘they are wont to let flow the waters’ (following two Present indicatives). I have not noticed any past-referring Present injunctives used inceptively, and none occur in *RV* II. While I would not be surprised to find one, given the existence of the inceptive gnomic use just referred to, the apparent scarcity of the Present injunctive in past inceptive use is in keeping with the general tendencies of augmentation noticed above: Though past-referring Present injunctives are not rare, the Imperfect is by far more common in such contexts.

The inceptive use of the Imperfect is found up to 6 times in *RV* II (6% of all Imperfects), all are securely augmented and 5 are securely interpreted (5% of the 92 securely interpreted Imperfects overall). This use accounts for 6% of past terminative uses of the Imperfect overall (6 out of 103).

SUMMARY OF PAST TERMINATIVE USES:

Taken together with its imperfective and “perfect-like” uses, the past terminative uses (concentrative-sequential, complexive, and inceptive) of the Imperfect/Present injunctive complete the picture to show that it is compatible with any aspect. It thus differs from the Aorist, which lacks imperfective interpretations and most often has “perfect-like” interpretations.

Overall, up to 121 of the 148 Imperfects/Present injunctives in *RV* II have past terminative interpretations (82%), 106 being securely interpreted (88% of all 121 securely interpreted Imperfects/Present injunctives). Of these, 103 are Imperfects (85% of the total 121), accounting for 95% of all Imperfects (out of 108), 97% of those that are securely interpreted and securely augmented (89 out of 92). The remaining 18 are injunctive (15%), accounting for 45% of all Present injunctives (out of 40), 50% of those that are securely interpreted and securely augmentless (12 out of 24).

Looking only at the indicational uses of the Imperfect/Present injunctive, the terminative uses account for 94% of the total (121 out of 129). The terminative injunctives account for 86% of the injunctives used indicatively in *RV* II (18 out of 21) and 100% of those that are securely interpreted and securely augmentless (12 out of 12).

If we include the non-past terminative uses, namely the 2 reportive uses (see next item), there are 123 terminative Imperfects/Present injunctives in *RV* II (82% of the total), 106 securely interpreted (86%). Of these, 103 are augmented (84%), 98 secure, and 20 are injunctive (16%), 19 securely so.

10. REPORTIVE PRESENT INJUNCTIVE: Like the Aorist injunctive, the Present injunctive can also have a reportive use. See Section 9.2 above for information about this reading. Examples are given in (117).

(117) REPORTIVE PRESENT INJUNCTIVE

- a. *agnīm náro dīdhitibhir arāṇyor hāstacyutī **janayanta** praśastām*
dūredṣaṃ grhāpatim atharyúm (*RV* VII.1.1).

‘Our men (**hereby**) **give birth to** Agni in the two fire-churning sticks, by their insights and the motion of their hands—to him who is proclaimed, to the flaming houselord, visible far away.’ (tr. adapted from Jamison & Brereton 2014:881).

- b. *sá īm vṛṣā **janayat**_[PRES.INJ.] tāsu gárbham sá īm śísur dhayati_[PRES.IND.] tám*
*rihanti*_[PRES.IND.]
só ’pām nāpād ānabhimlātavarṇo anyāsyeva ihá tanúvā viveṣa_[PF.IND.] (*RV* II.35.13).¹⁷⁵

‘As bull he **begets**_[PRES.INJ.] the embryo in these (waters). As infant he sucks_[PRES.IND.] them; they lick_[PRES.IND.] him.

The Child of the Waters, whose color never fades, has toiled_[PF.IND.] here as if with the body of another’ (tr. adapted from Jamison & Brereton 2014:453).

- c. *dadhanvé_[PF.IND.] vā yád īm ānu vócad_[AOR.INJ.] bráhmāṇi **vér**_[PRES.INJ.] u tát*
(RV II.5.3).

‘When he has run after_[PF.IND.] it, he (hereby) speaks_[AOR.INJ.] sacred formulations [*bráhmāṇi*] and **pursues**_[AOR.INJ.] this (office of Brahman-priest)’ (tr. adapted from

175. Here the Padapāṭha reads augmented Ipf. *ajanayat*, but the Pres. inj. *janayat* is to be read instead on the basis of the caesura and the context, being followed by two indicative Presents (Hoffmann 1967:121, n.29).

(117a) is the opening to a hymn that “describes the kindling of Agni in the house so that the household fire will guard its prosperity and help it flourish” (Jamison & Brereton 2014:880). Yet Jamison & Brereton’s (2014:881) translation of *janayanta* as ‘gave birth to’ does not seem to me to suit the presential context. Rather, I interpret *janayanta* as referring to the kindling of the fire at the time that the hymn begins (or very close to it), and the strong fire-kindling imagery, especially *hástacyutī* ‘with rapid movement of the hands’, seems to support the idea that the speaker is reporting an installation of Agni that is underway at the time he is reciting the hymn. If the kindling event is viewed as coinciding with the hymn opening, this would motivate the use of an injunctive, rather than, say, a resultative Aorist indicative. Since the action is done by ‘our men’ (*náraḥ*) rather than the speaker or speakers, the Present injunctive, as opposed to the Aorist injunctive, is specifically motivated, since, as discussed above (§9.2), the Present injunctive is the preferred form in reportive sentences (i.e., ones where speakers do not have direct control over the event but merely report what is happening before their eyes), over and above the Aorist injunctive or Present indicative, which are typically used in performative sentences (i.e., where the speaker does have control over the event, which is effected by its own pronouncement).

In (117b), we have a verse that falls in the “ritualistic section” (Jamison & Brereton 2014:452) of the hymn to Apām Napāt (Child of the Waters). Given that it describes ritual activity, a gnomic reading of the Present injunctive and two Present indicatives in ab is unlikely. Further, the Perfect indicative in d (*viveṣa* ‘has toiled’), with its present-referring resultative interpretation, reinforced by the word *ihá* ‘here’, supports viewing the action of ab as taking place in the present moment. As the personages of Apām Napāt and Agni are “superimposed” (ibid.:452), *janayat* ‘begets’ thus refers to essentially the same sort of ritual action as *janayanta* ‘beget’ in (117a).

(117c) is a problematic verse and its interpretation is not at all secure. Nonetheless, it again has a ritualistic character, with a present-referring Perfect indicative in a. In b occurs the Aor. inj. *vocat* ‘speaks’. As Jamison (2015–:ad loc.) points out, “injunctive forms of *vóca-* almost always have a performative pres.-future sense, as in the famous and stereotyped opening of I.32.1 *ín-*

176. But cf. n.172 above on the many interpretive difficulties of this verse.

drasya nú vīryāṇi prā vocam ‘I (will) proclaim the manly deeds of Indra.’” A form that is performative in the first person is readily understood as reportive in the third person, and the present time reference is motivated “esp[ecially] since it fits well with the presential focus of the rest of the hymn” (Jamison 2015–). Reportive ‘(hereby) speaks’ is thus the likeliest interpretation of *vocat* here, supported by both pragmatic and contextual considerations. If *vocat* is reportive, it is difficult to read *vēḥ* any differently, and I accordingly interpret it as reportive ‘pursues’. Concerning *cd* of this verse (omitted in (117c)), where a past-referring Imperfect is used in an otherwise presential context, see my discussion of (111) above.

As with the performative use, I take the reportive reading to require that eventuality time and speech time be coextensive ($t_E = t_S$) and eventuality time be included in assertion time ($t_E \subseteq t_A$). The reportive use thus belongs to the terminative readings, though, unlike the others, it has present rather than past reference. However, for reasons discussed in Section 9.2 above, I treat this use separately from the other injunctives as regards the modal vs. indicatival divide. As I did with the Aorist (cf. §9.2 above), I will summarize the reportive use of the Present injunctive in relation to the other terminative readings of the Imperfect/Present injunctive, as well as in relation to both the modal and the indicatival uses of the Present injunctive (i.e., what the figures look like when the reportive use is included among the modal uses, and what they look like when it is included among the indicatival uses).

There are up to 2 reportive Present injunctives in *RV II* (there are no performative ones) making up 5% of the 40 total Present injunctives. Both are securely injunctive, though neither is securely interpreted. These make up about 2% of all terminative uses of the Imperfect/Present injunctive (out of 123), and 10% of terminative Present injunctives (out of 20). Taken together with the modal (directive and gnomic) uses of the Present injunctive (19 in all), the reportive Present injunctive accounts for up to 11% of this group in *RV II* (2 out of 19). Taken together with the indicatival uses of the Present injunctive (131 in all), the reportive Present injunctive accounts for up to 2% of this group (2 out of 131).

10.4 Pluractional and modal readings of the Present injunctive/Imperfect: Examples & frequency

11. PAST PLURACTIONAL/HABITUAL IMPERFECT/PRESENT INJUNCTIVE: As always, the pluractional interpretation is a special case of various other readings, including terminative, imperfective, and experiential, and such verbs may be past or present referring. Because the present-referring pluractional uses are dealt with elsewhere (i.e., under the headings for experiential, gnomic, etc.), I here consider only the past-referring examples.

We have already seen all three past pluractional Imperfects/Present injunctives that occur in *RV II* in the examples quoted above. Both of the Imperfects are Intensive. The Ip. *ádardar* in (109)=(113a) can be said to be pluractional in a frequentative sense (i.e., non-Intensive *adar* ‘pierced, split’ → Intensive *ádardar* ‘split to pieces, shattered’). The Ip. *ároravīt* in (79a)=(102a) is, by my interpretation, imperfective (progressive) and is pluractional in the iterative sense ‘kept bellowing’. Finally, the Pres. inj. *dyutayanta* in (79b)=(102b) is likewise past imperfective (progressive) and iterative-pluractional in the sense ‘were flashing forth, kept flashing forth’.

There are thus as many as 3 past pluractional Imperfects/Present injunctives in *RV II* (2% of the total), 2 securely interpreted (2% of the total). These account for 2% of indicational uses of the Imperfect/Present injunctive overall (3 out of 129). 2 are Imperfect (67%), both securely augmented and interpreted, accounting for 2% of all Imperfects; 1 is securely injunctive (33%), accounting for 3% of all Present injunctives, though it is not securely interpreted.

Though none of the examples in *RV II* are habitual, the Imperfect is elsewhere used to express this meaning in the past time. We have seen an example of this in (114b) above: *ghṛtásya stokám sakṛd áhna āśnām* [IPF.] ‘once a day I ate/would eat [IPF.] a drop of ghee’ (*RV X.95.16c*). For discussion and further examples of the Imperfect in this function see E. Dahl 2010:213–6.

The Present injunctive is also occasionally found in a past habitual function, as shown in (118), where the Pres. inj. *śnathayaḥ* ‘used to pierce’ occurs alongside a Present indicative with *sma*, designating ongoing or repeated action in the past, and two augmented Imperfects in *cd*, which are similarly past habitual.

(118) PAST HABITUAL PRESENT INJUNCTIVE (AND IMPERFECTS)

*trīḥ sma mā áhnaḥ śnathayo*_[PRES.INJ.] *vaitaséna utá sma me áviyatyai prnāsi*_[PRES.IND.]
*púrūravo ánu te kētam āyaṃ*_[IPF.] *rājā me vīra tanúvas tād āsīh*_[IPF.] (RV X.95.5).

‘[Urvaśī:] “Three times a day you **used to pierce**_[PRES.INJ.] me with your rod, and you
‘filled_[PRES.IND.] it up’ [=had an erection] for me, who did not seek it.

Purūravas, I followed_[IPF.] your will. You were_[IPF.] then the king of my body, you ‘hero.’”
(tr. Jamison & Brereton 2014:1549, with correction of a typo).

However, the Present injunctive (or indicative) is more typically used for present (or “timeless”) habituality, as E. Dahl (2010:251–2) discusses. I treat this use under the “gnomic” heading below (item 12.). Yet it should be noted that not all gnomic uses of the injunctive are pluractional in the iterative sense, though the two interpretations do sometimes coincide, as in (119), where the Intensive *jāṅghananta* ‘keep trampling’ is iterative in a general relative clause with present time reference.

(119) ITERATIVE-PLURACTIONAL GNOMIC PRESENT INJUNCTIVE

*ádha smā na úd avatā*_[PRES.IPV.] *sajoṣaso rátham devāso abhí vikṣú vājayúm*
*yád āśavaḥ pádyābhis títtrato rájaḥ pr̥thivyāḥ sánau jāṅghananta*_[PRES.INJ.] *pāñibhiḥ* (RV II.31.2).

‘Then [always] help_[PRES.IPV.] out our chariot, you gods of one accord, as it seeks prizes among the clans,

when[ever] the swift ones, crossing through the airy realm with their strides, **keep trampling**_[PRES.INJ.] on the back of the earth with their forefeet’ (tr. Jamison & Brereton 2014:446, interpolations mine).

12. GNOMIC PRESENT INJUNCTIVE: The gnomic use of the Present injunctive is about as frequent in occurrence as is the gnomic use of the Aorist injunctive, though the Present indicative seems to be preferred to either of these by a considerable margin in this function (see E. Dahl 2010:166–8 for a generous number of citations).¹⁷⁷ We have already seen four examples of the gnomic

177. In the last fourteen hymns of RV II alone (30–43) there are, conservatively, no less than 16 examples of gnomic-habitual Present indicatives, outnumbering the gnomic Aorist and Present injunctives in the whole Maṇḍala, viz. II.30.1, 2d; 31.2; 33.10; 34.3 (3x, after two injunctives in 2ab), 34.8; 35.8, 35.15c (in a general relative clause), 38.7d, 38.9b; 42.1b; 43.1–3.

Present injunctive, which occur alongside the Aorist injunctive in (94) above (§9.3). For further discussion and examples see E. Dahl 2010:251–2.

In *RV* II there are up to 11 examples of the gnomic Present injunctive (7% of all Imperfects/Present injunctives), 7 of which are securely interpreted (6% of all securely interpreted Imperfects/Present injunctives). These account for 28% of injunctives in *RV* II (11 out of 40), 29% of those that are securely interpreted (7 out of 24), or 65% of modal injunctives (out of 17), 58% of those that are securely interpreted (out of 12).

Recall that Homer differs markedly as regards this use. In Homeric, the augmented Aorist is the only form (besides the Present indicative) regularly found in gnomic sentences. Only a handful of augmentless Imperfects in Hesiod, the Homeric Hymns, and, perhaps, in a few cases in the Homeric epics themselves attest to the gnomic Present injunctive usage inherited into Greek (West 1989), which was later lost entirely (cf. (72) in §5.4 above).

13. FUTURATE PRESENT INJUNCTIVE: This use, like the non-gnomic modal uses of the Present injunctive generally, is extremely rare. We have seen the one possible example that occurs in *RV* II in (98) above, assuming that *bhajat* is correctly read (against the Padapāṭha) as an injunctive and that my interpretation of it as futurate ‘is going to give a share’ is correct (see there for discussion). If the Present injunctive is less common than the Aorist injunctive in the futurate use, this may be attributed to blocking on the part of the marked subjunctive forms, which are more consistently built to Present stems than they are to the Aorist (cf. §9.3 above).

One context in which we reliably find injunctives, including Present injunctives, having a futurate function is in interrogative sentences referring to future time, where they occur alongside subjunctives (Hoffmann 1967:245–7).

(120) FUTURATE PRESENT INJUNCTIVE

*kadā mártam arādhásam padá kṣúmpam iva sphurat*_[PRES.INJ.] *kadā naḥ śuśravad*_[PF.SJV.]
gíra índro aṅgá (*RV* I.84.8).

‘When **will** he **kick**_[PRES.INJ.] the ungenerous mortal with his foot like a mushroom?

When will he listen_[PF.SJV.] to our hymns? – Indra indeed!’ (tr. Jamison & Brereton 2014:213).

In *RV* II there is just 1 possible example of a futurate use of the Present injunctive, which is securely injunctive but not securely interpreted. It thus accounts for up to 3% of all Present injunctives or 6% of modal injunctives (out of 17).

14. MODAL/DIRECTIVE PRESENT INJUNCTIVE: Hoffmann (1967:256–61) argues convincingly that the Present injunctive is generally not used in an affirmative directive function. This makes good sense, seeing as the Present stem builds imperatives and optatives more regularly than Aorists (cf. discussion in §9.3 above). These marked modal forms can be assumed to block the application of would-be directive uses of the Present injunctive.

One exception, in Hoffmann’s (1967:261) view, is *sr̥jat* at *RV* VII.104.20d. Thus he interprets *nūnám̐ sr̥jad aśániṃ yātumádbhiyaḥ* as ‘Now let him hurl the stone against the sorcerers’. However, this is not the view taken by Jamison & Brereton (2014:1017), whose translation is given in (121).

(121) AFFIRMATIVE DIRECTIVE PRESENT INJUNCTIVE(?)

etá u tyé patayanti śváyātava índram̐ dipsanti dipsávo ádābhiyam

śísīte śakráḥ pīsunebhiyo vadhám̐ nūnám̐ sr̥jad aśániṃ yātumádbhiyaḥ (*RV* VII.104.20).

‘These very dog-sorcerers are flying. Those inclined to deceit desire to deceive Indra, the undeceivable.

The able one is honing his weapon of death for the slanderers. Now he **discharges** [or ‘let him discharge’?] the missile toward the sorcerers’ (tr. Jamison & Brereton 2014:446, interpolation mine).

I follow Jamison & Brereton (2014:1017) and therefore classify *sr̥jat* here as reportive (‘he now discharges’), rather than directive (cf. n.146 in §9.2 above).

Excluding (120), I am aware of no clear imperatival uses of the Present injunctive in the *R̥gveda*. There may be one or two optatival ones, as suggested by Kiparsky (2005:222). I have already explained that Kiparsky’s (2005:222) optatival interpretation of *chadayat* in (104b) above (‘may he seem’) is less likely than a continuous-state interpretation (‘he seems’), since the blatant formal contrast of an injunctive among optatives invites interpretive contrast to go along with it. One other possible example of a Present injunctive having an optatival sense is (122).

Note, however, that Jamison & Brereton (2014:725) interpret the modality here as potential rather than directive or deontic (i.e., ‘would choose’ rather than ‘should choose’).

(122) OPTATIVAL (POTENTIAL) PRESENT INJUNCTIVE(?)

vísvo devásya netúr márto vurīta_[AOR.OPT.] sakhyám

vísvo rāyá īśudhyati_[PRES.IND.] dyumnám vr̥ñīta_[PRES.INJ./OPT.] puṣyāse (RV V.50.1).

‘Every mortal would choose_[AOR.OPT.] the companionship of the god Leader.

Every one aims_[PRES.IND.] (praise) at (the god Leader) for wealth and **would choose**_[PRES.INJ./OPT.] brilliance, in order to thrive’ (tr. Jamison & Brereton 2014:725, cd after Jamison 2015–:ad loc.).

Yet this example has the same complication as the Aor. *dhīmahi* ‘may we obtain’ in (96b) above, in that the Pres. *vr̥ñīta* is formally ambiguous and may be taken to be either an injunctive or an optative. It is striking that in b the (unambiguous) Aor. opt. *vurīta* is used, which is built to the same root as the Pres. inj./opt. *vr̥ñīta* ($\sqrt{vr̥}$ ‘choose’). The two forms are of the same metrical shape and occupy the same position in the line, so the use of both forms is significant. It may be, then, that, as with Pres. inj. *chadayat* in (104b) above, the formal contrast between *vr̥ñīta* and *vurīta* is meant to signal functional contrast of some sort.

In this connection, it seems relevant that the Pres. ind. *īśudhyati* intervenes between *vurīta* and *vr̥ñīta* and must have a gnomic-habitual sense ‘everyone aims at’ (an optatival interpretation, of course, being categorically unavailable to the Present indicative). In such cases, Kiparsky’s (1968:34–8) conjunction reduction proposal (cf. §9.3 above) would predict that, if *vr̥ñīta* is an injunctive, it should be interpreted like the Pres. ind. *īśudhyati* that immediately precedes it. Even under Kiparsky’s (2005) revised, anaphoric account of the injunctive (cf. again §9.3 above), it seems that *īśudhyati* would still be the most accessible form for the interpretation of *vr̥ñīta*. Then again, the use of the uncommon Aor. opt. *vurīta* in b may leave such an impression on the mind of the addressee that when the more common Pres. inj./opt. *vr̥ñīta* comes along in d its optatival interpretation is salient despite the intervening Present indicative. This is Jamison’s (2015–:ad loc.) assumption, though she admits that a contrastive, non-optatival interpretation of *vr̥ñīta* is also reasonable.

I suggest that, as so often in the *R̥gveda*, the poet is deliberately taking advantage of for-

mal ambiguity so as to get double functional duty out of a single form. All of the formal and contextual cues just discussed—the impact of the unusual Aorist optative, the gnomic Present indicative, the formal ambiguity of *vr̥ṇīta*—would be as relevant (and confounding) to the interpretive strategies of the addressee as they are to us. So, a listener having in mind both the emphatically Aorist optative of b and the habitual Present indicative of c would, upon hearing the ambiguous form in d, have access to two possible interpretations, each equally well motivated by discourse cues, and so could in principle recover both meanings at once. I would therefore read *vr̥ṇīta* neither as contrasting with nor matching the function of *vr̥ita* per se, but would rather let its formal ambiguity reflect real and deliberate interpretive ambiguity. Thus, the sense of cd would be: ‘Everyone aims (praise) at (the god Leader) for wealth; (everyone) would choose brilliance—and does so—in order to thrive’.

This exhausts the evidence known to me for an affirmative directive or optative use of the Present injunctive. While the Present injunctive probably does not exclude such interpretations categorically, its application in modal contexts appears typically to be blocked by the marked modal forms. In the prohibitive construction, however, which is not regularly built with modal forms, such blocking does not apply, and so the one modal context in which the Present injunctive does occur with some frequency is in negative directive sentences, as in (123).

(123) PROHIBITIVE PRESENT INJUNCTIVE: INHIBITIVE (a) AND PREVENTIVE (b)

a. *ví uchā duhitar divo mā cirāṃ tanuthā*_[PRES.INJ.] *āpaḥ* (RV V.79.9ab).

‘Shine forth, Daughter of Heaven; **don’t stretch out**_[PRES.INJ.] [i.e., don’t delay] your work any longer’ (tr. mine, after Hoffmann 1967:79).

b. *mā jāsane vr̥ṣabha no rarīthā*_[PRES.INJ.] *mā te revātaḥ sakhiyé riṣāma*_[AOR.INJ.] (RV VI.44.11ab).

‘**Give us not**_[PRES.INJ.] to exhaustion, bull. Let us not come to harm_[AOR.INJ.] in our comradeship with you, the wealthy’ (tr. Jamison & Brereton 2014:827).¹⁷⁸

As (123) shows, the Present injunctive may have either an inhibitive function, of the type ‘stop doing what you are currently doing’, or a preventive one, of the type ‘don’t do such-and-

178. The preventive reading of Pres. inj. *rarīthāḥ* is admitted by Hoffmann (1967:88–90).

such' (i.e., in the future) or 'take precautions so that such-and-such doesn't happen'. Though Hoffmann (1967:74–92) argues extensively that the Present injunctive is regularly inhibitive, while the Aorist is regularly preventive (ibid.:45–73), a proposal followed by many others, including E. Dahl (2010:246–9), I have shown in Hollenbaugh 2020a that there is no consistent, meaningful contrast between the Present and Aorist injunctive in prohibitive sentences, and that the distribution of these forms in prohibition can be better explained by purely formal considerations (cf. §9.3 and n.155 above).

Directive uses of the injunctive occur 5 times in *RV* II (3% of all Imperfects/Present injunctives), all securely injunctive, 4 securely interpreted (3% of all securely interpreted Imperfects/Present injunctives). All 5 are prohibitive, of which 4 are preventive (80%) and 1 is plausibly inhibitive (20%) but not securely interpreted. These account for 29% of all modal uses of the Present injunctive in *RV* II (5 out of 17), 33% of those that are securely interpreted (4 out of 12), and 13% of all Present injunctives (5 out of 40), 17% of those that are securely interpreted and securely augmentless (4 out of 24).

SUMMARY OF MODAL USES:

In all, there are up to 17 modal uses (gnomic, futurate, and directive) of the Imperfect/Present injunctive in *RV* II (11% of all Imperfects/Present injunctives), 12 of which are securely interpreted (10% of all securely interpreted Imperfects/Present injunctives). All of these are injunctive (43% of the total Present injunctives), 15 securely so (41% of the total). The modal uses of the Present injunctive are thus considerably less frequent than the modal uses of the Aorist injunctive (cf. §9.3 above). This suggests that the application of the Present injunctive in modal contexts is more often blocked by marked modals built to Present stems than Aorist injunctives are blocked by marked modals built to Aorist stems.

10.5 Functional range of the R̥gvedic Present injunctive/Imperfect

The distribution of uses of the Imperfect/Present injunctive in *RV* II is summarized in Table 10.2. Percentages given in the bottom two rows are taken out of the total for those rows. Thus,

for instance, there are 18 past terminative Present injunctives, which represent approximately 45% of the 40 Present injunctives in *RV* II. Percentages in the row above these, however, are taken out of the total for their columns. So, for instance, the combined total for past terminative uses of the Imperfect indicative and Present injunctive in *RV* II is 121, which represents about 94% of the 129 indicatival Imperfects/Present injunctives. I give no percentage for the total of the reportive uses.

TABLE 10.2: Distribution of the Imperfect/Present injunctive in *R̥gveda* II (148 total)

| | indicatival (129) | | | modal (17) | | | reportive (2) |
|------------|-------------------|-----------------------|--------------------------|--------------------|------------------|------------------|---------------|
| | ipfv. (4, 3%) | “pf.-like” (4, 3%) | past term. (121, 94%) | gnom. (11, 65%) | dir. (5, 29%) | futr. (1, 6%) | |
| ind. (108) | 1 (0.9%) | 4 (4%) | 103 (95%) | 0 | 0 | 0 | 0 |
| inj. (40) | 3 (8%) | 0 | 18 (45%) | 11 (28%) | 5 (13%) | 1 (3%) | 2 (5%) |

The most striking feature of the Imperfect/Present injunctive is its extremely frequent terminative usage, accounting for some 94% of all its indicatival uses and 82% of its uses overall (121 out of 148). Most of these are concentrative-sequential, but it is also an important feature of the Imperfect/Present injunctive that, unlike the Aorist, it is compatible with the complexive interpretation. Both of these facts are reminiscent of the Homeric usage of the Imperfect, which is also regular (and most frequent) in the concentrative-sequential function and, unlike the Aorist, regularly has complexive uses.

Yet, marginal as they are, the imperfective and “perfect-like” uses of the Imperfect/Present injunctive are important in correctly defining its functional range. The application of the “perfect-like” uses is understandably blocked by forms better suited to these meanings in the grammar, namely the Aorist and Perfect, just as we saw in Homer. Unlike Homer, however, the imperfective uses of the Imperfect in the *R̥gveda* are extremely uncommon. I have suggested above that this can be taken to be a consequence of a combination of non-semantic factors, such as text type and pragmatic blocking. The kinds of contexts which favor the “backgrounding” of events in a discourse are most characteristic of lively narration (of the type ‘While so-and-so was doing such-and-such, someone stabbed him’), which is not common in the hymns of the *R̥gveda*. Where such contexts do arise, we find participles as the preferred means of ex-

pressing action that is ongoing in the past, which may even be predicated in a kind of pseudo-periphrastic construction, as discussed in Section 10.1 above. So, the kinds of contexts that would support having a progressive or continuous-state use of the Imperfect are rare to begin with and, where they do occur, the application of the Imperfect is typically blocked by the general preference for participial forms in these functions. Nonetheless, because the Imperfect can be seen in at least some cases to securely attest imperfective uses, its denotation must be compatible with them (i.e., it cannot rule them out all together).

Moreover, if we were to assume that the R̥gvedic Imperfect was truly incompatible with imperfective interpretations, it would imply that the Imperfect was a perfective gram (as E. Dahl (2010:209) briefly considers). This would be typologically odd, since the Imperfect is, morphologically speaking, the past tense of the Present indicative, and the Present shows clear imperfective uses, including habitual, progressive, and continuous-state uses (see E. Dahl 2010:164–8) and in no way behaves like a present perfective gram (of the type seen, for example, in Russian). So, assuming that the Imperfect denotes perfective aspect would put us in the unfortunate position of having to claim that the Present does too, and indeed that there is a tense contrast in this perfective system, which is itself cross-linguistically uncommon (cf. Ö. Dahl 1985:81–4). Such an assumption is therefore to be avoided.

Excluding this possibility, if the past of the Present is not an imperfective gram, as the R̥gvedic Imperfect emphatically is not, then it can really only be a simple past tense gram. Simple pasts cross-linguistically pattern closely with perfectives, in that both are regularly used to sequence events chronologically in the past (terminative), but simple pasts differ from perfectives in being compatible with imperfective interpretations (see Bybee et al. 1994:83–5). The R̥gvedic Imperfect thus fits the profile of the simple past gram type. Present-day English provides a nice parallel, in that its Preterite is the morphological past of the simple Present and typically has terminative uses. Yet we would not want to say that the Present or Preterite of English are incompatible with imperfective interpretations, since they can both be used in continuous-state and habitual functions, even if their progressive uses are categorically blocked by the periphrastic Progressive. Such functional categories, being robustly terminative and at least marginally compatible with imperfective and “perfect-like” interpretations, are best considered

to be neutral in aspect, and thus capable of expressing any kind of aspectual interpretation. This analysis predicts that any form that is more specialized for a particular aspectual meaning will, under normal circumstances, block the application of the aspectually neutral category in that meaning. This is indeed what we find in English, where the Progressive blocks the application of the Present and Preterite in their would-be progressive uses, and it is also what we find in Ṛgvedic Sanskrit, where the imperfective uses of the Imperfect are restricted by the participial constructions that are preferred in such contexts, while its “perfect-like” uses are restricted by the Aorist and Perfect, which are more specifically suited to those functions.

This account thus aligns the Vedic Present and Imperfect with cross-linguistically well known tense–aspect systems and is able to accommodate the maximally wide functional range exhibited by the Imperfect/Present injunctive in the *Ṛgveda*. I therefore follow E. Dahl (2010:185–6, 213–6, 252, 260–1) in concluding that the Present injunctive/indicative is neutral in aspect ($t_E \circ t_A$) and, accordingly, that the Imperfect represents a simple past tense gram ($t_E \circ t_A \wedge t_A \leq t_0$). This amounts to the same denotation for the Imperfect as was assigned to the Homeric Imperfect in (75) above.

10.6 Denotation of the Ṛgvedic Present injunctive/Imperfect

The denotation of the Present injunctive is given in (124).

(124) NEUTRAL-ASPECT DENOTATION OF THE PRESENT INJUNCTIVE IN ṚGVEDIC SANSKRIT

$$[\lambda P. \lambda t_A. \exists e (t_e \circ t_A \wedge P(e) = 1)]$$

For some eventuality e , eventuality time t_e overlaps with assertion time t_A , and the eventuality description P applied to the eventuality e is true (=1).

As can be seen, (124) simply requires that eventuality time and assertion time overlap. This denotation predicts that the Present injunctive will be compatible with any kind of aspectual or temporal interpretation, as we in fact find. Since its denotation is maximally broad, its application in some of the uses with which it is semantically compatible is predicted to be restricted by forms more specialized for those uses. This is again borne out in the data, where we find that

the Present injunctive is only used as a substitute for certain modal forms (or for Aorist injunctives in prohibitions), or when context makes its time reference clear, or when the poet is being deliberately vague, or in reportive and gnomic sentences. Moreover, its indicative uses are practically restricted to past time reference, due to the existence of the marked Present indicative and subjunctive, which typically block the application of the Present injunctive in non-past contexts.

Assuming, as I have above (§9.5), that the augment contributes the meaning [NON-MODAL], the Imperfect is predicted to have exactly that set of readings identified as “indicative” in Table 10.2 above. That is, the Present injunctive leaves open all modal possibilities, but when the augment is added, thereby forming the Imperfect, the modal uses are excluded, thus leaving only the indicative interpretations available (recall that the reportive uses are unable to be reliably classified). As the indicative readings are almost uniformly past referring, the Imperfect is effectively a past tense, and I give its denotation as such in (125). It should be noted, however, that past time reference was probably not a strict entailment of the Imperfect in the *Ṛgveda*, as evinced by some cases of augmented Imperfects with non-past reference (see n.116 above). The denotation in (125) is thus simplified for convenience, since the Imperfect is practically restricted to past time reference. In fact, however, the Imperfect probably does not assert that the eventuality is located in the past, only that it is non-modal (i.e., indicative). Given the functional range of the Present injunctive generally, which in its indicative uses is practically limited to past time reference by virtue of the existence of the Present indicative, the augment’s entailment that the meaning be non-modal amounts to essentially the same thing as requiring that it be past in tense, with very few exceptions.

(125) SIMPLE PAST DENOTATION OF THE IMPERFECT IN *ṚGVEDIC SANSKRIT*

$$[\lambda P.\lambda t_A.\exists e(t_e \circ t_A \wedge t_A \preceq t_0 \wedge P(e) = 1)]$$

For some eventuality e , eventuality time t_e overlaps with assertion time t_A , and the assertion time at least partially precedes the local evaluation time t_0 , and the eventuality description P applied to the eventuality e is true (=1).

The denotation in (125), which is identical to that of the Homeric Imperfect, predicts that,

like the Present injunctive, the Ṛgvedic Imperfect is compatible with all kinds of aspectual interpretations but that, unlike the Present injunctive, it is restricted to past time reference (i.e., the indicative uses). This adequately accounts for its observed functional range, predicting that it is compatible with terminative, “perfect-like,” and imperfective uses but that its application in particular uses will be blocked by forms with more specific denotations that are better suited to those uses. This is borne out, in that the Imperfect is regularly blocked from applying in its “perfect-like” uses by the Aorist and Perfect, and in its imperfective uses by the participial constructions that are preferred in these functions.

The Ṛgvedic Imperfect thus closely resembles the Homeric Imperfect in terms of its denotation (both are effectively simple pasts). They differ in that in Homer the Present injunctive has merged functionally with the Imperfect, such that the Imperfect is limited to past time reference irrespective of augmentation. As in Homer, the Ṛgvedic Imperfect/Present injunctive is regular in past sequential narration and competes with an emergent-perfective Aorist which is also found in narration (typically without the augment) and blocks the application of the Imperfect/Present injunctive in its “perfect-like” functions. So, although I depart substantially from the traditional account of the Imperfect and Aorist in these languages, I in fact find that they are systematically similar in all essential points. Both languages have an Aorist that can be best understood as an emergent perfective and an Imperfect that is best understood as a simple past. It stands to reason, then, that the proto-language from which these languages inherited their verb systems contained functional categories that were not far removed from the ones we find attested. On this basis, I propose that the PNIE Imperfect was a simple past tense gram and the Aorist was a perfect gram. As noted above, this requires only the assumption that the Aorist has “drifted” somewhat along the typologically common grammaticalization path toward perfectivity by the time it is first attested in Greek and Sanskrit. The advantage of this analysis is that it establishes a coherent picture of the origin and evolution of these functional categories over time, in addition to accounting for the observed usage found in the languages under investigation.

CHAPTER 11

Perfect indicative/injunctive and Pluperfect

Though I do not treat the Perfect as fully as the Aorist and Present/Imperfect, it is important to give an overview of its usage in the *R̥gveda*, so that one may get a sense of how the Perfect fits in with the verb system in general and in particular how it might interact with the usage of the Aorist and Imperfect/Present injunctive.

The Perfect is frequent in a function which I call “gnomic-empiric,” which is to say that it can have a present habitual sense (see Hoffmann 1967:115; Kiparsky 1998:34–5). The label “empiric” is added to *gnomic* in row 12 of the third (Perfect) column of Tables 9.1 and 10.1 above, in order to capture the common generic statements of the type *suté-sute vāvrdhe* (RV 3.36.1c) ‘at every pressing (Indra) has [always] been strengthened’ and hence ‘*is* [always] strengthened’ (so Jamison & Brereton 2014:518). The term *empiric* is taken from Smyth’s (1956:431, 435) Greek grammar, describing a variety of experiential perfect that has universal quantification, affirmative or negative, of the type *You have always helped me* or *You have never helped me* (NB: this is not the same as universal perfect *You have (always/never) been helping me*). From such statements an inference of generic interpretation can be drawn, such that a sentence like *You have always helped me* can be used in a context where I want to suggest that you are a characteristically helpful person and can thus mean something very close to ‘You always help me, you are a helper’. Generalizations based on past experience may accordingly be used in aphorisms (e.g., *Faint heart never won fair lady*). It is worth noting, however, that not all presential/timeless generic uses of the Perfect in the *R̥gveda* can be clearly derived in this way, so I retain the label *gnomic* and hyphenate the two as “gnomic-empiric” so as to include both possibilities.¹⁷⁹ The

179. Here may be placed *āha* ‘says’, *āhūr* ‘they say’, conventionalized in a presential meaning. Cf., e.g., RV II.12.5ab: *yām smā prchānti kūha sēti ghorām utēm āhur naiśó astīti enam* ‘The terrifying one about whom they always ask, “Where is he?”—and they say of him, “He does not exist!”’ (tr. Jamison & Brereton 2014:416). Here, as often, the Pf.

Perfect injunctive may be seen to have gnomic use at *RV* 4.42.6a, if *cakaram* means ‘I do (all these deeds)’, though it is perhaps more likely resultative ‘I have done’ (so Jamison & Brereton 2014:626 and E. Dahl 2010:384).¹⁸⁰

The intensive-frequentative use of the Perfect is again a term carried over from Greek grammar¹⁸¹ for the sake of consistency. Vedic has a special Intensive functional category, however, so examples of the simple Perfect in the intensive use are not common.¹⁸² One example may be *abhí vāvaśe* at *RV* II.14.9c, if it means ‘is bellowing (desirously) at’ (cf. Kümmel 2000:487).¹⁸³

On the stative use of the Vedic Perfect see Kiparsky 1998:33 and E. Dahl 2010:356–7. An important difference from Greek, however, is that the Perfect in Vedic seems not to have stative as a use except where it is built to state predicates. So, we find *bibhāya* ‘fears’ (to \sqrt{bhi} ‘fear, be afraid’), *jāgāra* ‘stays awake’ (to \sqrt{j} ‘be awake’), *vēda* ‘knows’ (to \sqrt{vid} ‘know’), and so on. All examples of stative Perfects in *RV* II are built to state roots/predicates ($\sqrt{myakṣ}$ ‘be attached to’, \sqrt{cit} ‘perceive, appear’, \sqrt{vid} ‘know’, \sqrt{grdh} ‘be greedy’, \sqrt{prath} ‘spread’, and $\sqrt{sthā}$ ‘stand apart’ (though this last one might well be read as resultative, with Jamison & Brereton 2014:457)). We find nothing, to my knowledge, of the type so frequent in Greek from Homer on, which builds states to achievement and accomplishment predicates, of the type τέθνηκε ‘is dead’ (to θνήσκω ‘die’). This may be taken to suggest that the Perfect in Vedic has grammaticalized toward being a perfective gram significantly more than the Perfect in Homer, which is still a stative-resultative gram, expressing stative meaning when built to events as well as states.

The present-referring resultative Perfect can refer to an event that is recent or remote, provided its result state persists at speech/evaluation time. An example of a recent resultative Per-

āhūr seems to have a generic-habitual interpretation ‘they tend to say, say regularly’.

180. However, Hoffmann (1967:247) suggests that this is not an injunctive at all but rather the Pf. ind. *cakara* with an added *-m* before a word beginning with a nasal (*nākih*).

181. See Wackernagel 1926–8 [2009]:215–6; Schwyzler & Debrunner 1950:264; Gildersleeve & Miller 1900:100–101; Chantaine 1953 [2015]:228–9.

182. *RV* II.35.5c has a Perfect built to an Intensive *úpa...prasarsré*, which has iterative-pluractional meaning ‘keeps stretching (himself) out toward’, as is typical of Intensives in general.

183. An example in the Pluperfect may be *āmīmet* at *RV* I.164.9c, if it means ‘was bellowing’, though it could be inceptive ‘started bellowing’ or simply concentrative ‘bellowed’ (cf. differently E. Dahl 2010:382–3).

fect is *úpa nūnám yuyuje* ‘now he has yoked up’ (*RV* VIII.4.11cd).¹⁸⁴ An example of a remote resultative Perfect is *dadhuḥ* ‘they have established’ at *RV* II.2.4b, referring to the remote but permanent establishment of the sun.¹⁸⁵ Counter-sequential uses are also quotable, as in (86a) above, where the Pluperfect *ádudrot* is anterior in a causal *hí*-clause, parallel to the Aorist in the *a*-pāda (see under this verse in Jamison 2015–).

It is a remarkable fact that the Pluperfect in the *Rgveda* can also have a *present*-referring resultative interpretation (cf. n.185 above), as E. Dahl (2010:373–5) discusses. This is odd if the augment marks past time reference and if the Pluperfect is really, as is often said, the past of the Perfect. It is less odd if, as I have argued, the augment marked indicative mood. In that case, the augmented Pluperfect would be equivalent to the Perfect injunctive restricted to just its indicational functions. As in the case of the Aorist and Imperfect, a speaker may use the augment to rule out the gnomic/modal uses that the injunctive might have in a context of present reference. The combination of the meanings PERFECT and NON-MODAL in a context of present reference can essentially only yield a presential “perfect-like” interpretation, in this case resultative.

The resultative use of the Perfect indicative is its most common “perfect-like” interpretation in *RV* II, accounting for some 53% of all its present-referring “perfect-like” uses (29 out of 55). Remarkably, 61% of these (17 out of 28) are non-recent resultative (not including counter-sequential), while 39% are recent-past resultative (11 out of 28). Recall that the resultative Aorist can likewise have recent- or remote-past reference, though recent-past accounts for about 91% of the cases (cf. §9.1 above). In addition, the Perfect has experiential interpretations in up to 29% of its present-referring “perfect-like” uses (16 out of 55) in *RV* II, whereas the Aorist is experiential only about 8% of the time (cf. §9.1 above). There is thus a clear partial division of labor between the Aorist and Perfect as regards “perfect-like” interpretations: The Perfect tends to cover the non-recent resultative and experiential uses, while the Aorist tends to be recent resultative. Crucially, however, these are only tendencies and neither form is incompatible with any

184. Cf. similarly *RV* II.4.2b, 5.7d, 5.8d, 9.3cd, 19.8b, 29.5b, 31.6c, 32.1d, 35.13d, 38.6a.

185. The Pluperfect has a remote resultative value at *RV* II.30.3c and a recent resultative value at *RV* II.38.6a, V.30.13c, X.31.3a. The Perfect injunctive *cakaram* might have resultative meaning at *RV* 4.42.6a, if it means ‘I have accomplished (all these deeds)’ (so Jamison & Brereton 2014:626 and E. Dahl 2010:384), but cf. n.180 above.

of the “perfect-like” interpretations, remote or recent. I therefore assume that their observed tendencies are due to competition with one another for the same general semantic “space,” each occupying its own niche through conventions of usage. In general, it may be said that the Perfect typically refers to remote eventualities with some sort of current relevance (viz. remote resultative or experiential), while the Aorist typically refers to recent eventualities with some sort of current relevance (viz. recent resultative).¹⁸⁶ The difference is represented graphically in Figure 11.1.

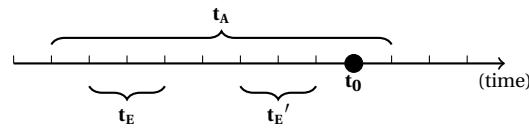


FIGURE 11.1: Most common “perfect-like” interpretations of the Perfect (t_E) and Aorist (t_E')

I know of only one reasonably clear example of the Perfect indicative having a present universal interpretation, despite Kiparsky’s (1998:34) and E. Dahl’s (2010:359–61) putative examples, all of which seem to me better classed as multiple-event experiential or empiric uses.¹⁸⁷ In (126), on the other hand, the action of the Pf. *paptuḥ* seems to hold continuously from a point in the past up through the present moment (so Kümmel 2000:296).

(126) UNIVERSAL PERFECT IN THE *ṚGVEDA*

prá sīm ādityó asṛjad vidhartām ṛtām síndhavo váruṇasya yanti

*ná śrāmyanti ná ví mucanti eté váyo ná **paptū** raghuyā párijman* (RV II.28.4).

‘As their distributor, the Āditya sent them gushing forth: the rivers [now] move [or ‘keep moving’] to the truth of Varuṇa.

These do not get tired, nor do they rest. Like birds they **have been flying** [i.e., ever since they were sent forth in 4a] swiftly on their earth-encircling course’ (tr. adapted from Jamison & Brereton 2014:442).

186. Interestingly, however, none of the 4 experiential Aorists in RV II refer to eventualities in the recent past, whereas 2 of the 16 experiential Perfects (13%) appear to be recent with respect to speech/evaluation time, where predicates of ‘offending’ refer to the subject as being (or having been) in a state of guilt rather than to a result state of the object. Thus, RV II.27.14b: *yád vo vayám cakṛmā kác cid āgaḥ* ‘If we **have committed** any offense against you [lately]’; and RV II.29.5ab: *prá va éko mimaya bhūri āgo yán mā... śasāsá* ‘I alone **have perpetrated** a great offense against you, such that you have reprimanded me’.

187. E. Dahl (2010:382–3) also suggests that the Pluperfect sometimes has past universal interpretations, but his examples do not seem to me sufficiently probative.

The Perfect indicative regularly has past terminative uses,¹⁸⁸ often in concentrative-sequential functions (see above in (86a), (108a), (115b)) and occasionally in complexive ones, as shown in (127).

(127) COMPLEXIVE PERFECT

*kīṃ sā řdhak kṛṇavad yāṃ saḥásram māsó **jabhāra** śarádaś ca pūrvīḥ* (RV IV.18.4ab).

‘How could she put aside the one whom she **bore** for a thousand months and many autumns?’ (tr. Jamison & Brereton 2014:586).

On the pluractional interpretations of the Perfect indicative see Kiparsky 1998:33–5 and E. Dahl 2010:361, which are invariably experiential and so are counted in row 4 in Tables 9.1 and 10.1. On the other hand, the Pluperfect may be used to refer to pluractional and/or habitual situations in the past, on which see *ibid.*:383–4 (no such examples occur in RV II).

A futurate (= subjunctive-like) use of the Perfect injunctive may occur at RV X.28.5a: *kathā́ ta etád ahám ā ciketaṃ* ‘How shall I understand this (speech) of yours’ (cf. Hoffmann 1967:246). The Perfect injunctive is used modally with *mā* in prohibitions (e.g., *mā bibhītana* ‘don’t be afraid’ at VIII.66.15b), though it is the least frequent of the three stem types in this function, and its employment instead of the Aorist in this construction can mostly be explained by purely formal considerations rather than functional ones (see Hollenbaugh 2020a:794–5 for discussion).

I present an overview of the usage of the Perfect indicative, Perfect injunctive, and Pluperfect in *R̥gveda* II in Table 11.1. Percentages for the three bottom rows are out of the total for each row; percentages for the fourth row from the bottom are out of the combined total for each major column (i.e., indicatival vs. modal).

In sum, the Perfect in the *R̥gveda* has a functional range similar to that of the Aorist—the two being much closer in terms of usage than are their cognate categories in Homer (cf. §7 above). Though the *R̥gvedic* Perfect resembles the Homeric Perfect in that both regularly have gnomic or present-habitual uses and are the preferred means of expressing the experiential perfect meaning, it differs in nearly every other respect. Unlike the Homeric Perfect, the *R̥gvedic* one regularly has past terminative uses, and its “perfect-like” uses are more often resultative

188. Despite the claims of Hoffmann (1967:160) followed by Kümmel (2000:78) that, as E. Dahl (2010:366) paraphrases it, “the Perfect Indicative is never used with a purely past time reference in Early Vedic.”

TABLE 11.1: Distribution of the Pf. ind./inj./Plpf. in *R̥gveda* II (124 total)

| | indicativ (95) | | | modal (29) | |
|----------------|-------------------------|-------------------------|------------------|--------------------|--------------------|
| | “pf.-like” (58, 61%) | past term. (36, 38%) | ipfv. (1, 1%) | gnom. (28, 97%) | prohib. (1, 3%) |
| Pf. ind. (112) | 56 (50%) | 32 (29%) | 1 (0.9%) | 23 (21%) | 0 |
| Pf. inj. (10) | 0 | 0 | 4 (40%) | 5 (50%) | 1 (10%) |
| Plpf. (2) | 2 (100%) | 0 | 0 | 0 | 0 |

than present stative. Even its present stative uses show an important difference from those of the Homeric Perfect, in that the Homeric Perfect is used to derive states from events, while the *R̥gvedic* Perfect is stative only when combined with state predicates. Recall that the Aorist in Homer and the *R̥gveda* has stative interpretations only when built to state predicates as well, so it may be said that in this respect too the *R̥gvedic* Perfect resembles the Aorist more closely than it does the Homeric Perfect. It seems, then, that, like the Aorist, the *R̥gvedic* Perfect has undergone “aoristic drift” to a considerable extent, having “drifted” along the familiar grammaticalization pathway (see (9) in §2.1 above), repeated here as (128), from stative-resultative to perfect to emergent perfective. The Aorist and Perfect in the *R̥gveda* thus represent two varieties of emergent perfective grams, each with its own functional niche in the grammar, as described above.

(128) stative-resultative » perfect » emergent perfective » perfective, simple past

A benefit of this analysis is that it does not run into the thorny problem that E. Dahl (2010:366–7) must wrestle with in order to explain how a supposed perfect gram could regularly have past terminative uses, as the *R̥gvedic* Perfect clearly does. He himself notes, in fact, that the past terminative uses of the Perfect can be explained by grammaticalization of the type in (128), but he does not actually accommodate this in his synchronic denotation of the Perfect in the *R̥gveda*. Since diachronic facts cannot in themselves be used to account for synchronic usage, the mere statement that the *R̥gvedic* Perfect is developing past terminative uses is not enough to explain them in terms of the synchronic grammar of the *R̥gveda* (insofar as one can talk about a synchronic grammar of the *R̥gveda*). Defining the Perfect as a perfect gram, as he

does (E. Dahl 2010:372), does nothing to explain why the Perfect can be used in past sequential narration in the *R̥gveda*; in fact, it predicts that it should not be found in such contexts. By contrast, if we admit that the Perfect has already grammaticalized to an emergent perfective gram by the time of its earliest attestation in the *R̥gveda*, with a denotation along the lines of (52) and (101) above, then its regular past terminative functions are not only unproblematic but predicted. One important difference, however, is that the denotation of the Perfect, unlike the Aorist, must allow for complexive interpretations, of the type in (127) above, and therefore must permit the coextension of t_E and t_A . This can be easily captured by the simple inclusion relation $t_E \subseteq t_A$, as opposed to the proper inclusion relation in the Aorist's denotation in (52) and (101). Other observed differences in usage between the behavior of the Aorist and Perfect at this stage can be explained pragmatically, as an effect of their interaction with one another, as explained above.

Conclusion

GENERAL CONCLUSION

This dissertation has taken usage as both evidence and explanandum. In doing so, I have addressed the following questions:

1. How are the Aorist and Imperfect used in Homer and the *Ṛgveda*?
2. What are the relative frequencies of each usage?
3. What governs the observed functional range of each form?
4. What determines the actual usage of each form? Why are some readings more common than others?
5. What can this tell us about the relationship between these functional categories in the two languages and their development over time?
6. How does the traditional perfective/imperfective account that is widely assumed in the IE linguistics literature hold up to this analysis?

Answering the first question involved a variety of research methods. I have made copious reference to the standard handbook treatments of Homeric and *Ṛgvedic* grammar and critically evaluated linguistic studies bearing on verbal usage in these languages. From these were drawn such examples as could be found to show whether or not a particular use was attested for a particular functional category in the relevant texts.

In addition, I investigated the meaning of each verb form in two sample corpora—one book from each text—in order to get a rough sense of the relative frequency of the uses of each functional category with respect to one another, thus addressing the second question (which bears also on the first). To do this, I had to create tagged corpora of a kind that, to my knowledge, has not previously been made, being coded not just for morphological tags but also for usage labels, such as “resultative,” “progressive,” “inceptive,” and so on. Tagged corpora of this kind have not generally been produced, it seems, due to the fact that it is often very difficult to be precise about these interpretations with any confidence.

I have, for my part, taken as a starting assumption that the inevitable textual difficulties and interpretive uncertainties that arise when examining a text do not pose an insurmountable obstacle to quantifying usage. Given enough data, I reason, the overall trends of usage emerge, for the most part, quite clearly, despite the limitations of the analyst or disagreements that may be had among scholars regarding the interpretation of this or that passage. Of course, I have tried to be as careful as possible with my philological assessments, working closely with my mentors and backing up my readings with textual evidence where possible (context cues, adverbial phrases, parallel verbs, text type, known facts about a particular verb's usage based on other passages, and so on). I have also tried to be as honest about my level of confidence in each reading as I could be, giving figures for the "secure" interpretations (in the sense defined above) and for the total number of interpretations that seem to me likely to exist for a given form in the corpus.

This method yielded, for the first time, precise counts for each use of each form, so as to give a sense of how frequent each is in occurrence relative to the others. While the secure attestation or lack of attestation of a particular reading is typically enough to tell us whether or not a form was semantically compatible with that use, this does not give a sense of how typical of that form the reading is. Being able to quantify readings was therefore essential to understanding not just the functional range of a form, but how it is actually used. This allowed us to understand the pragmatic interaction of functional categories in the verb system, which often limits the application of a form in a particular use even if it is semantically compatible with that use. For instance, we have seen that, even though the Imperfect in both languages is compatible with "perfect-like" interpretations, it seldom realizes them, since the other verb forms that compete with it are semantically more specialized for these uses, namely the Aorist and the Perfect.

The third question thus demanded a semantic answer, while the fourth demanded a pragmatic one. By adducing examples of their uses, I was able to determine the functional range of each form, which guided the construction of denotations that I assigned to those forms. The denotations make concrete predictions about what a form can and cannot mean, and hence how it can and cannot be used. But they say little about how the form *is* or *is not* used (i.e., to what extent the meanings it is capable of expressing are actually realized). To do this, I relied on

my quantitative data to make a variety of pragmatic arguments that help to explain the relative frequency or scarcity of a given reading within a form's functional range.

The answer to the fifth question has not changed in its essentials from the answer I gave in Hollenbaugh 2018:56–63, and I encourage the reader to see there for discussion of the comparative reconstruction of these categories and its implications for reconstructed Proto-Indo-European, bearing in mind some important updates of the dissertation. Though I have concluded here that the Ṛgvedic Aorist was already an emergent perfective rather than strictly perfect, as I had concluded in Hollenbaugh 2018:24–5, this does not affect the reconstruction. Given what we know about the grammaticalization of perfects to perfectives cross-linguistically, the most reasonable and least costly assumption is still that the Aorist represented a perfect gram in the proto-language from which both Greek and Sanskrit are descended. Given that the Imperfect is a simple past in both languages and there is no evidence to suggest that it had not always been so, I assume straightforwardly that it was always a simple past tense, at least as far back as we can reconstruct.

Yet, as the sixth question presupposes, this conclusion is out of step with what I have called the “traditional” reconstruction of the Aorist and Imperfect in IE linguistics, as well as the usual assumptions about these categories both in Sanskrit and, especially, in Greek. Rather than a perfective and an imperfective, as their names might be taken to suggest, my investigation of the data has led me to conclude that the Aorist and Imperfect represent an emergent perfective and a simple past tense gram respectively, and I have explained their functional ranges by assigning each an appropriate denotation, the Aorist denoting perfect(ive) aspect of a particular kind, and the Imperfect denoting neutral aspect and past tense. This is a major departure from viewing the Aorist as a simple perfective gram ($t_E \subseteq t_A$) and the Imperfect as a past imperfective ($t_E \supseteq t_A \wedge t_A < t_0$).

I believe my analysis has two main advantages over the traditional model. First, it straightforwardly accounts for the usage of the forms as attested in the earliest Greek and Sanskrit documents. By basing my semantic analysis not on received wisdom or expectations about what these forms ought to mean, but rather on their usage as it actually occurs in the texts (as near as can be determined), the compatibility of each form's semantics with its observed usage is

essentially guaranteed.

One place where these insights are especially helpful is in regards to the meaning and usage of the Imperfect. Under my account the regular use of the Imperfect in past sequential narration is expected, falling out directly from its compatibility with perfective aspect. Under the traditional account, on the other hand, this use of the Imperfect requires special pleading, which is at best not explanatory and at worst inaccurate. Bianconi (2019:179), for instance, attempts to explain the concentrative uses of the Imperfect in Greek by appealing to the “narrative imperfect” familiar from Italian or French: e.g., *Quelques minutes plus tard, Pierre et Bruno apparaissent* (Ip_f.) *dans un panache de poussière* ‘A couple of minutes later, Pierre and Bruno *could be seen to emerge* (Ip_f., lit. ‘were emerging’) out of a cloud of dust’ (ex. from Grønn 2008a:159). But narrative imperfects in these languages are of highly restricted occurrence, built predominantly to achievement predicates and typically arising only when there is an overt adverbial clause specifying a sufficiently brief assertion time (Grønn 2008a:158–61). This scarcely resembles the Homeric or Ṛgvedic Imperfects, which are freely and robustly used to order events chronologically in past narration (often alongside Aorists), as well as in other terminative functions, including complexive and inceptive uses, and are unrestricted by predicate type or the presence or absence of an overt temporal adverb. In addition, unlike the Imperfects in Romance, the Homeric/Vedic Imperfects are compatible with “perfect-like” uses—a generalization entirely missed under a “narrative imperfect” account but readily explained by one that assumes that the Imperfect is aspectually neutral.

If someone wished to view the Imperfect as denoting imperfective aspect, I have no doubt that some of its perfective-like behavior could be accounted for by defining imperfective aspect in the right way, as Altshuler (2014) has done for the Imperfective of Russian. And I agree heartily with the spirit of his argumentation, in that the concept of “neutral aspect” should not be applied as a panacea to every form that exhibits usage that aligns with our traditional notions of both imperfective and perfective functionality. Indeed, many forms that mainly have imperfective readings (in the sense of this dissertation) but occasionally show terminative uses should not, *prima facie*, be assumed to be neutral in aspect. But this is not at all what we find in Homer or the Ṛgveda. Rather, we find a form used overwhelmingly in terminative functions,

concentrative-sequential above all. Particularly in the case of the Vedic Imperfect, which requires serious argumentation in order to even suggest that it had imperfective uses at all, it would seem absurd to claim that it represents a past imperfective category.

Moreover, my neutral aspect analysis of the Imperfect makes an important prediction that is not captured (as far as I can see) by an imperfective analysis along the lines of Altshuler 2014, namely that certain of its uses will be categorically blocked by the application of a form whose meaning is more specialized for one or another of those uses. Whereas perfectives and imperfectives are on a roughly level playing field in terms of notional content, a simple past and a perfect(ive) are not. Because the perfect(ive) has a more specific denotation, it is predicted to block the application of the simple past in certain contexts, as in the case of its “perfect-like” uses. This kind of blocking is expected if the Imperfect is semantically “weaker” (i.e., broader) than the Aorist; it is unexpected otherwise.

The most serious problem for the traditional account is that the behavior of the Imperfect/Present injunctive in Vedic is completely unexpected if it originally denoted imperfective aspect. The Homeric Imperfect at least shows imperfective uses a fair proportion of the time, so one could perhaps devise ways to account for its more frequent terminative uses under the traditional account. But the Vedic Imperfect/Present injunctive is almost uniformly terminative. To account for this under traditional assumptions, one would have to say that the Imperfect of the proto-language had largely lost its imperfective uses by the time of its earliest attestation in Vedic and acquired terminative ones. Such an assumption has the disadvantage of being typologically irregular. According to Bybee et al. (1994:81–95) simple past tenses (and perfectives) tend to grammaticalize from perfects, zero-marked stems, or some other lexical source, not from imperfectives (cf. *ibid.*:125–75). I am familiar with no case of a grammaticalization from a past imperfective to a simple past tense. Even if one could be adduced, it would not alleviate the problem that such a cross-linguistically uncommon change would have had to have occurred not once but twice, in both Vedic and Homeric. In other words, the traditional account would have to assume that a typologically irregular semantic change, whereby a past imperfective came to have predominantly terminative uses, occurred independently in two related languages and to a different degree in each language. My account, by contrast, needs

only to assume that both languages inherited a simple past tense category (the Imperfect), and that this form exhibits its imperfective uses more in Homeric than in R̥gvedic owing to various language-specific factors (discussed above). This has the additional advantage of being in line with the later development of the Greek Imperfect after Homer, which becomes more, not less, “imperfective-like” as time goes on (see Hollenbaugh 2021b).

Second, my analysis has important implications for Indo-European tense–aspect systems more generally. As I suggested in Hollenbaugh 2018:62, the verb system of Hittite (and Anatolian generally) falls out more or less directly from an assumption that the Imperfect was originally a simple past tense. The Anatolian verb system is monothematic, in that it has just one verbal stem that serves as a base for all tense endings (though it may be suffixed to mark imperfective aspect, on which see below). The Preterite in Hittite is by all accounts a simple past tense, expressing all manner of aspectual relations and carrying no implication other than past time reference (Hoffner & Melchert 2008:309). If we assume that PIE possessed a past/non-past system similar to that found in Hittite, and that Anatolian branched off from PIE at a time before the Aorist had fully grammaticalized as a distinct functional category (cf. Clackson 2007:133–5), then the Anatolian verb system—in terms of its usage at least—is straightforwardly derived from the proto-language. Thus, the Hitt. Pret. *kuenta* ‘struck’ is morphologically identical to its Vedic cognate, Ip̥f./Pres. inj. *(a)han* ‘struck’ (both < **g^{wh}én-t*), and both, accordingly, have the functional range and usage expected of a simple past tense (i.e., neutral aspect). Their usage differs in a variety of ways, however, motivated by language-specific factors. Most importantly, the Vedic Imperfect coexists in a system with the Aorist and Perfect, which restrict its usage in certain ways, whereas the Hittite Preterite does not.¹⁸⁹ Further, under the traditional account, the tacit assumption must be that PIE possessed a past/non-past imperfective without a perfective (assuming the Aorist had not fully grammaticalized as a functional category until PNIE). This would be typologically unusual, in that verb systems that mark imperfective aspect typically also mark perfective aspect. By contrast, assuming that PIE had a simple past/non-past system (of the Hittite or Germanic type) is typologically unremarkable.

189. Though Hittite has a periphrastic Perfect and the -*šk*-Imperfectives mentioned below, neither of these is obligatory for marking their respective aspectual meanings (cf. Hoffner & Melchert 2008:309–11, 317).

Another positive result pertains to the existence of the so-called “Ionic preterites” in Homeric/Ionic Greek, which are Imperfects or Aorists suffixed in $-\sigma\chi$ - (cf. discussion in §4.3 above). This suffix exists also in the Anatolian languages, as $-\check{s}k$ -, where it marks imperfective aspect (Hoffner & Melchert 2008:317–22). As Bianconi (2019) has recently argued, the suffix $-\sigma\chi$ - probably marked imperfective aspect in Homeric/Ionic Greek as well, having been borrowed from Anatolian (or, rather, “replicated”). Though Bianconi (2019:173) says that there is a “lack of semantic distinction” between the plain Imperfect and the suffixed $-\sigma\chi$ -forms, assuming that the simple Imperfect expressed imperfective aspect on its own, in fact they have quite different functions in Homer. The simple Imperfect is, as I have shown, a simple past tense, while the suffixed $-\sigma\chi$ -forms are, following Bianconi (2019), genuinely imperfective. If so, then the comparison with Hittite is more absolute than Bianconi (2019) seems to realize: Hittite, just like Homeric, has a simple past tense that is unspecified for aspect, and this can be optionally suffixed with $-\check{s}k$ - to mark imperfective aspect overtly. If, as Bianconi (2019) assumes, Homeric (and PIE) already possessed an imperfective gram, namely the simple Imperfect, then the $-\sigma\chi$ -suffix, as Bianconi (2019:173) puts it, “would simply be redundant.” But if, on the other hand, Homeric did not mark imperfective aspect with the simple Imperfect, then the use of the $-\sigma\chi$ -suffix in Greek is motivated. As in Hittite, in the absence of any other strategy for overtly marking imperfective aspect Homeric/Ionic Greek made use of an imperfectivizing suffix, thereby encoding imperfective meaning, optionally, in contrast to the unsuffixed Imperfect (and Aorist).

The verbal usage of the Iranian branch also falls out nicely from my analysis, and it is a desideratum for future research to reassess the Old Iranian material in light of the findings of this dissertation. The Imperfect and Aorist in Avestan and Old Persian are functionally similar to their Vedic counterparts in all essential points, though only in Old Avestan does the verb system seem to retain its full vitality. The Aorist appears to have “perfect-like” uses at least some of the time, as noted by Willi (2018:395), citing *nū... viiādarəsəm* ‘I have just now seen (Ahura Mazda)’ (Yasna 45.8).¹⁹⁰ Elsewhere the Aorist shows a concentrative-sequential function, referring to events in the non-recent past (e.g., *acistā* ‘he recognized (Zarathustra)’ at Yasna 51.11). The Aorist in Old Persian similarly has past concentrative as a use, as in *baga vazraka Auramazdā*

190. Similarly Yasna 30.3: *yā yēmā xʷafnā asrvātəm* ‘twins who **have been heard of** as the two dreams’.

*hya imam / būmim **adā*** ‘The god Ahura Mazda (is) great, who **created** this earth’ (DNa 1–2). Like Vedic, the Aorist injunctive in Old Avestan may have a “timeless” or gnomic interpretation, as, perhaps, in *kē vātāi duuq̄nmaibiiascā **yaogə** āsū* ‘Who **yokes** the two swift ones to the wind and the clouds?’ (Yasna 44.4).¹⁹¹ The Aorist in Old Avestan may also have a performative function, as in Vedic and (post-Homeric) Greek, such as *+āuuuacāmā* ‘we address’ at Yasna 38.5 (Kellens & Pirart 1988:137 “nous disons”).

The Imperfect/Present injunctive, meanwhile, matches Vedic and Homeric usage in that it is most often used to sequence events in the past (concentrative) but is also compatible with imperfective interpretations. Its concentrative function can be seen in Young Avestan *janat̄ aži*m ‘slew the serpent’, matching Ved. *áhann áhim* (RV I.32.1c, etc.). A sequence of past-referring Present injunctives may be seen in (129a). See similarly *yat̄ Miθrəm...**frādaδəm*** ‘When I **created** Mithra’ (Yašt 10.1). Yet the Imperfect/Present injunctive is sometimes used to refer to states of affairs ongoing in the past, as *barat̄* ‘bore, possessed’ in (129b).

(129) PRESENT INJUNCTIVE IN YOUNG AVESTAN: SEQUENTIAL (a) AND IMPERFECTIVE (b)

- a. *taṭ̄ ahmāi **jasat̄** āiiaptəm yat̄ puθrō **us.zaiiata**...yō **janat̄** aži*m *dahākəm* (Yasna 9.7–8).

‘Such fortune **befell** that a son **was born** to him who **slew** the serpent Dahaka’ (cf. Kellens 1984:237).

- b. *yim θraētaonō taxmō **barat̄** yō janat̄ aži*m *dahākəm* (Yašt 14.40).

‘(the power) which mighty Thraētaona **bore (i.e., possessed)**, who slew the serpent’ (cf. Fortson 2010:236).

In Old Persian the situation is similar, as can be seen in (130). In (130a) the Imperfect has what appears to be its most typical use, sequencing events in past narration. In (130b) it is used of past habitual events. In (130c) the Ip̄f. *āha* ‘was’ has a characterizing function, referring to a state ongoing in the past.

191. So Fortson (2010:235), who compares the Present indicative in RV III.35.4: *yunajmi hārī āśū* ‘I yoke the two swift steeds’. Yasna 44.4 could, however, be interpreted as cosmogonic, which would favor an interpretation of *yaogə* as past concentrative ‘yoked’.

(130) IMPERFECT IN OLD PERSIAN: SEQUENTIAL (a), HABITUAL (b), and CONTINUOUS STATE (c)

- a. *pasāva kāra haruva hamičiya **abava** hacā Kabūjiyā **abiy** avam **ašiyava** utā Pārsa utā Māda utā aniyā dahyāva xšačam hauv **agarbāyatā*** (DB I.40–2).

‘Afterwards, all the people **became** rebellious against Cambyses (and) **went over to** him [i.e., Bardiya], both Persia and Media and the other regions, (and) he **seized** the kingdom’.

- b. *upariy arštām **upariyāyam**... hya **viyanādaya** avam ufraštām **aparsam*** (DB IV.64–7).

‘I **behaved** in accordance with righteousness... Who(ever) **did damage**, him I **punished** severely’.

- c. *martiya hya āgariya **āha** avam ubartam abaram hya arika **āha** avam ufraštām aparsam* (DB I.21–2).

‘The man who **was** loyal, him I rewarded well, he who **was** evil, him I punished severely’.

The Iranian Imperfect/Present injunctive can thus be understood as a simple past/neutral aspect gram, like its cognate category in Vedic, being compatible with a wide range of aspectual functions, including both terminative and imperfective ones. The Iranian evidence is thus directly predicted by the proposal put forth here.

Finally, my proposal has many implications for the other IE branches as well, which in general help make sense of developments that are puzzling under the traditional model. Though the details are beyond the scope of this dissertation, I offer a few examples to illustrate how my reconstruction is compatible with the developments of various branches. For instance, the Armenian Aorist mainly continues the PIE Imperfect. This was a curious fact under the traditional account, since it meant that what is synchronically a simple past or perfective continues what had been imperfective in the proto-language. By my account, however, the functional merger of the PNIE Imperfect and Aorist as the Armenian Aorist is unsurprising, and its non-imperfective meaning is expected. In addition, the creation of a new Imperfect in Armenian, which has an imperfective value and stands in functional contrast to the Aorist, makes good sense if the inherited Imperfect was not specified for imperfective aspect. This would resemble

the situation in Anatolian and Homeric/Ionic Greek, which recruited the /-sk-/ suffix as an imperfective marker in their verb systems that otherwise lacked a form specified for imperfective aspect (see above). The innovation of the (imperfective) Imperfect in Italic is also understandable along these lines.

By the same token, the loss of the Imperfect in all the western branches makes sense in the context of what we know about the general developments of the Aorist and Perfect. According to Bybee et al. (1994:83), “the main difference between a language that has a simple past and one that has a perfective is the presence or absence of a past imperfective.” If, in Western IE generally, the Aorist was a perfect tending towards becoming a simple past, and the Perfect was a stative-resultative tending towards becoming a perfect, and thence a simple past as well, the merger of these two as a single past tense category is entirely regular. Because the Imperfect was not an imperfective, they would not be expected to have become perfectives, as in fact they did not. This is what we find, for instance, in the Germanic languages, where the Preterite, which largely continues the PNIE Perfect, is a simple past tense gram, showing a functional range expected of a form neutral in aspect, including past terminative, “perfect-like,” and imperfective uses.¹⁹² If the Imperfect was a simple past as well, and not an imperfective, there would have been no particular motivation for it to have persisted as a distinct functional category in the language. Thus the loss of the Imperfect in the Western IE languages can be understood as a kind of “push-chain” effect, in response to the grammaticalization of the Perfect and Aorist to simple pasts. This “push-chain” effect resembles the much later changes in modern colloquial German and French, whereby the periphrastic Perfects, built with *haben/sein* and *avoir/être* respectively, have almost entirely taken over the functions that formerly belonged to the simple past tenses of these languages (viz. the *Präteritum* and *Passé simple* respectively). In some branches, such as Italic, the secondary creation of a new Imperfect established the in-

192. Cf., e.g., the “perfect-like” uses of the Old English Pret. *cwōm* ‘went, have gone’ that open *The Wanderer*, followed by the Pres. *sendon* ‘are’: *Hwær cwom mearg? Hwær cwom mago? [...] Hwær sendon seledreamas?* ‘Where has the horse gone? Where has the rider gone? Where are the revels in the hall?’ (cf. Traugott 1992:183). On the use of the Preterite in Middle and Early Modern English to designate ongoing action in the past (i.e., imperfective), see Fischer 1992:245–246 and Rissanen 1999:226, e.g.: *So happid it on a tyme, that his wife and he together dynid or souppid with that neybour of theirs, and than she made a mery quarell to hym* (More, *Dialogue against Tribulation* 81). So in the Present, e.g., *What do you read, my lord?* to mean ‘What are you reading?’ (*Hamlet* II.ii; cf. Rissanen 1999:221).

herited Aorist/Perfect (now formally and functionally merged into one) as a perfective in contrast to the innovative past imperfective category (per Bybee et al. 1994:83). A secondary perfective/imperfective contrast was established in other language families as well, most notably Slavic.

My account of the PIE Imperfect as a simple past—and of the PNIE Aorist as a perfect—thus makes concrete predictions about the later development of the verb system in the various daughter languages which help make sense of many of the strikingly similar developments that we find. In particular, it is able to account straightforwardly for the general loss of the Imperfect in many of the Western IE languages, and, at the same time, explain why, in the branches that continue the PIE Imperfect—such as Greek, Indo-Iranian, Anatolian, and Armenian—it is generally not imperfective in meaning but functions rather as a simple past tense.

NOMENCLATURE AND TECHNICAL ABBREVIATIONS

- t_A** assertion time: the interval about which some claim is made (i.e., asserted), with respect to which the runtime of the eventuality is said to hold and may be assessed as either true or false. 54–59, 61–66, 68–74, 80, 83, 100, 106, 108, 113, 122, 124–127, 129, 132, 133, 136–139, 153, 154, 159, 165, 169, 172, 183, 196, 201, 204, 217–220, 224–227, 231, 237, 246, 247, 249, 250, 255, 265, 266, 274, 278, 287–290, 292, 293
- t₀** evaluation time (or time of local evaluation): the point or interval of perspective from which a state of affairs is “evaluated” as to its truth or falsity and the location of its temporal parameters (t_E, t_A, or t_S) in time relative to one another. These temporal parameters may be situated prior to, at, or after the contextually salient evaluation time. In the default case, speech time (t_S) and evaluation time coincide, but the evaluation time may be past or future “shifted” in certain syntactic or discourse contexts. 54–58, 61–64, 66, 99, 119, 124–126, 129, 130, 133, 136, 137, 139, 154, 160, 217, 218, 225–227, 246, 265, 266, 278, 287, 289, 293
- t_E** eventuality time: the interval at which the eventuality (state or event) expressed by a verb holds true. 54–59, 61–66, 68–74, 83, 99, 100, 106, 108, 113, 119, 122, 124, 126, 127, 129, 130, 132, 133, 136–139, 153, 154, 159, 165, 172, 183, 196, 201, 204, 217–220, 224–227, 231, 237, 247, 249, 250, 255, 265, 271, 274, 278, 287–293
- t_S** speech time (or time of utterance): the point or interval at which the speech act takes place (typically the “now” of the present moment). This may be thought of as a special case of evaluation time (t₀). Where this term is used (rather than t₀ or t_{0/s}) it is intended that evaluation times other than speech time not be considered. 54–56, 58, 61, 62, 80, 119, 124, 129, 130, 136, 201, 224, 227, 255, 287, 288, 291, 292
- t_{0/s}** speech time or any other contextually salient evaluation time: This refers to the evaluation time (t₀), whether it coincides with speech time (t_S) or not. Technically speaking, it is not distinct from simple t₀. It is used in this dissertation only for the sake of clarity and ease of exposition, particularly in contexts where the default case of speech time is most intuitive

but I do not wish to rule out the possibility of past or future shifting (as the term t_s would do). 56, 63, 65, 66, 69–71, 124, 125, 127, 169, 218, 227, 287

1 first person 18, 19, 141, 202, 209, 212

2 second person 19, 209, 215, 216

3 third person 19, 91, 138, 141, 212

accomp. accomplishments, referring to an eventive situation or predicate type consisting of a preparatory phase and a culmination, such as *come* or *paint a picture*. 99, 131

achiev. achievements, referring to an eventive situation or predicate type consisting of a culmination only, such as *arrive* or *fall asleep*. 99, 131, 182, 230

Akk. Akkadian 91

Aor. Aorist (indicative unless otherwise stated) 5, 10, 11, 64, 67, 73, 79–82, 84–86, 95, 98, 100, 107–112, 115, 118, 119, 135, 141, 151, 155–158, 170–172, 177, 178, 181, 189, 191, 194, 197, 200, 202, 204, 205, 207–209, 211, 214, 216, 218, 219, 229, 231, 235, 236, 238, 239, 243–245, 248, 249, 251, 253, 254, 260, 261, 290

Arab. Arabic 91, 177

aug. augment, prefixed to the verb in some IE language families: *á-* in Indo-Iranian (including Ved.), *è-* in Gk./Hmc. Its function and origin are a matter of ongoing scholarly debate. 14–16, 20, 177, 178

CF counterfactual or contrary-to-fact use 98, 99, 131, 183

Class. Classical Gk. (c. 500–300 BCE) 295, 296

conc. concentrative reading: the eventuality is characterized as complete in the past with respect to an assertion time interval (t_A) that fully contains (properly includes) the runtime of the eventuality (t_E), as determined by the local syntactic or discourse context. 143, 157

cont. continuous reading: a state is characterized as ongoing (“continuous”) with respect to an assertion time interval (t_A) that is properly included in the runtime of the event (t_E), as determined by the local syntactic or discourse context. 178

dat. dative case 82

dir. Directive: Any verb use that involves an imposition, or desired imposition, of the speaker’s will upon another speech-act participant or upon the world for the fulfillment of the eventuality referred to in the lexical meaning of the verb. These include commands, prohibitions, exhortations, instructions, and wishes. 263

du. dual number 212

ex. example from 11, 68, 84, 85, 101, 115, 118, 140, 145, 279

exp. experiential reading: a “perfect-like” interpretation in which the consequent state of a past eventuality holds at evaluation time (t_0) but its result state does not necessarily hold (type *I have been to Paris*). 158, 182, 230

f. feminine gender 18

Fut. Future indicative 85, 117–119

futr. Futurate: The use of a verb form that is not specified for future time reference to refer to an eventuality located in the future with respect to evaluation time. 263

gen. genitive case 18

Gk. Greek 80, 211, 288, 290, 291

gnom. Gnostic: A generic-habitual interpretation that is not past- or future-referring, typically translated by the simple Present tense in English. Gnostic sentences quantify over eventualities that occur at regular or semi-regular intervals and often refer to general truths not limited to a particular time or place. As such, they are common in gnomic sentences, similes, statements about immortal beings or natural phenomena, and general relative clauses. 263, 273

- hab.** habitual reading: an eventuality holds at regular or semi-regular intervals over an indefinite span of time ($t_E \supset t_A$), as determined by the local syntactic or discourse context. 177, 178, 182, 230
- Heb.** Hebrew 91
- Hitt.** Hittite 216, 281, 292
- Hmc.** Homeric Gk. (c. 800–700 BCE) 79, 81, 178, 288
- IE** Indo-European 1, 3, 8, 11, 40, 48, 49, 136, 217, 221, 276, 278, 284–286, 288, 291, 292
- ind.** indicative mood 67, 98, 108, 117–119, 131, 170–172, 176–178, 181, 189, 197, 202, 204, 205, 207–209, 216, 218, 219, 229, 231–233, 235, 236, 239, 240, 243–245, 249, 250, 253, 257, 260, 263, 269, 273
- inj.** injunctive form of the verb in PIE and Indo-Iranian (including Ved.), consisting of the verb stem plus secondary endings the without augment, formally equivalent to the augment-less Aor. and Ip. in Hom. 170–172, 176–178, 181, 182, 194, 197, 200, 202, 204, 205, 207–209, 211, 216, 219, 229–233, 241–246, 248, 250, 251, 253, 254, 256–258, 260, 261, 263, 273, 281
- Ip.** Imperfect indicative 10, 46, 67, 73, 79, 82, 83, 86, 95, 107, 109–112, 135, 136, 141, 143, 150, 151, 155–158, 170–172, 177, 181, 189, 194, 197, 208, 229, 231, 232, 235, 236, 238–241, 244, 245, 248–251, 253, 256, 257, 281, 283, 290
- Ip.** Imperfective: the common English name of the imperfective grams in Slavic and Semitic languages, among others 67, 68, 91
- ip.** imperfective (interpretation, aspect, gram type, or gram) 143, 146, 178, 263, 273
- ip.** imperative mood 211, 238, 239, 257
- Lyc.** Lycian 216
- m.** masculine gender 18, 91
- mid.** middle or mediopassive voice 138

Myc. Mycenaean Gk. (c. 1400–1200 BCE) 79–83, 178

n. neuter gender 18

nom. nominative case 18

opt. optative mood 18, 209, 211, 233, 234, 260

pa. past 232

part. participle 4, 5, 108, 214, 232, 238, 239

PClass. Post-Classical Gk. (Hellenistic Koine and Roman-Imperial) (c. 300 BCE–400 CE) 294

PE Primary ending: Verb endings in IE languages are agreement markers that indicate person, number, and voice on finite verbs. The primary endings are used for non-past verb forms, including the Present and Future indicative and the subjunctive mood (though in Sanskrit this can also have secondary endings). 14, 15, 20

Pf. Perfect (indicative unless otherwise stated) 11, 98, 115, 128, 131, 181, 182, 189, 229, 230, 233, 239, 240, 244, 250, 253, 258, 268, 269, 271, 273

pf. “perfect-like” uses, referring to two or more of the following interpretations: resultative, experiential, stative, and universal. 176, 263, 273

PfE Perfect ending: Verb endings in IE languages are agreement markers that indicate person, number, and voice on finite verbs. The Perfect endings are used for the Perfect indicative. In Greek the endings of the Pluperfect paradigm are also partially distinctive. 16, 20

pfmtv. performative reading: describes a verb or verb phrase whose utterance enacts or signals some change of state in the real world, of the type *I now/hereby pronounce you legally wed*. The runtime of such eventualities is thus coextensive with the speech time ($t_E = t_S$). 178

Pfv. Perfective: the common English name of the perfective grams in Slavic and Semitic languages, among others 67, 68

PIE Proto-Indo-European, the reconstructed ancestor of all IE languages, including the Anatolian languages (Hitt. etc.). 1, 48, 216, 221, 281, 282, 284, 286

pl. plural number 141, 212, 215, 216

Plpf. Pluperfect indicative 98, 99, 131, 181, 182, 189, 229, 230, 273

PNIE Proto-Nuclear-Indo-European, the reconstructed ancestor of all non-Anatolian IE languages, including the Tocharian A/B. 39, 48, 221, 267, 281, 284–286

Pres. Present (indicative unless otherwise stated) 4, 5, 81, 82, 84, 95, 115, 118, 128, 135, 140, 150, 171, 172, 177, 178, 181, 194, 202, 207–209, 211, 214, 216, 218, 219, 229, 231–234, 238, 239, 241–246, 248, 250, 253, 256–258, 260, 261, 281, 285

pres. present indicative or present time reference (depending on context of use) 177, 178, 182, 229, 254

Pret. Preterite: the common English name of the simple past grams in Germanic and Anatolian languages, among others 281, 285

prog. progressive reading: an event is characterized as ongoing (“in progress”) with respect to an assertion time interval (t_A) that is properly included in the runtime of the event (t_E), as determined by the local syntactic or discourse context. 157, 178

prohib. prohibition (negative directive or command) 273

rptv. reportive reading: refers to verbs used to “report” an eventuality whose occurrence is in the extremely recent past with respect to—and thus practically coincides with—the time of utterance (t_s), of the type often used in sportscaster speech, e.g., *She shoots she scores!* The runtime of such eventualities is treated as coextensive with the speech time ($t_E = t_s$). 178

SE Secondary ending: Verb endings in IE languages are agreement markers that indicate person, number, and voice on finite verbs. The secondary endings are used for the Aorist, Imperfect, and Pluperfect indicative, the optative mood, and, in Sanskrit, the Aorist, Present,

and Perfect injunctives (formally equivalent to the augmented Aorist, Imperfect, and Pluperfect in Homer). Sanskrit also uses secondary endings for the conditional and sometimes for the subjunctive mood. 14–16, 20

sg. singular number 18, 19, 91, 138, 202, 209

sjv. subjunctive mood 115, 117, 118, 135, 171, 209, 214, 231, 258

Skt. Sanskrit 293

term. terminative reading: the eventuality is characterized as complete in the past with respect to an assertion time interval (t_A) that contains (improperly includes) the runtime of the eventuality (t_E), as determined by the local syntactic or discourse context. Terminative readings typically but not necessarily refer to events located in the past with respect to speech/evaluation time (t_0) and include the concentrative, complexive, inceptive, egressive, and performative/reportive interpretations. 146, 153, 178, 263, 273

tr. translation (by) 40, 84, 85, 101, 115, 118, 171, 172, 176, 184–186, 188–191, 194, 197, 202, 205, 208, 209, 211, 214, 215, 217, 231–233, 235, 237–241, 243–245, 248–251, 253, 257–261, 268, 271, 272

transfm. transformative, referring to the natural class of “bounded” situation types (i.e., those with an inherent endpoint), namely achievements and accomplishments. 99, 131, 182, 229, 230

Ved. Vedic Skt. 46, 283, 288, 290

XML Extensible Markup Language: a markup language that defines a set of rules for encoding documents in a format that is both human-readable and machine-readable. 32, 33, 35

ABBREVIATIONS OF TEXTS AND AUTHORS

AV The *Atharvaveda* 214

Aj. *Ajax* of Soph. 128

Atharvaveda The second most ancient text attested in the Sanskrit language (Vedic), consisting of 730 hymns divided into twenty books called *kāṇḍas*. About a sixth of the *Atharvaveda* consists of verses from the *Ṛgveda* and, except for *Kāṇḍas* 15 and 16, consists of poetry in a variety of meters (c. 1000–900 BCE). 200, 236, 294

EL. *Electra* of Soph. 128

EL. *Electra* of Eur. 87

HH *Homeric Hymns* (Homeric Greek, c. 800–700 BCE) 22, 77, 84, 141, 148, 156–158

Iliad The linguistically earlier of the two epics of Hom. (c. 800–700 BCE). 10, 17, 22–24, 28, 32, 34, 40, 77, 81, 84, 86, 87, 89, 92, 93, 95, 99–105, 107, 109, 110, 113, 114, 118, 120, 134, 136, 137, 139, 142, 145, 146, 149, 150, 152, 160–162, 168, 169, 174, 189, 222, 294

IL. The *Iliad* of Hom. 4, 5, 10, 11, 22, 37, 64, 67, 73, 77, 84–87, 94, 95, 100–112, 114, 115, 118–120, 128, 129, 132, 133, 135, 137–141, 143–151, 155–158, 160–162

Ion *Ion* of Plat. 67, 109

LXX *Septuagint* (PClass. Koine) 81, 296

Laws *Laws* of Plat. 87

MS *Maitrāyaṇī Saṃhitā* (early Vedic prose) 209, 235, 236

Mem. *Memorabilia* of Xen. 87

Odyssey The linguistically later of the two epics of Hom. (c. 800–700 BCE). 10, 17, 22, 40, 77, 84, 86, 87, 107, 134, 295

Od. The *Odyssey* of Hom. 5, 10, 22, 62, 77, 87, 94, 95, 100, 103, 106–108, 110, 111, 113, 129, 133, 135, 136, 138, 140, 141, 144, 145, 147–149, 155–158, 162

Or. *Orestes* of Eur. 129

RV The *R̥gveda* 10, 11, 22, 28, 165, 166, 168–171, 174, 176, 178, 179, 184–191, 193–217, 219, 231–233, 235–253, 255–263, 268–272, 283

SH *Shield of Heracles* of Ps.-Hes. 22, 77, 106, 107

Th. *Theogony* of Hes. 22, 77, 106, 107, 144, 147, 157, 159

WD *Works and Days* of Hes. 22, 77, 106, 116

R̥gveda The most ancient text attested in the Sanskrit language, namely its archaic variety known as Vedic or Vedic Sanskrit. It consists of 1,028 hymns in a variety of meters collected in ten books called *maṇḍalas*, composed by a number of different poets over a considerable period of time (completed c. 1200–1000 BCE). 1, 10, 11, 22, 23, 26, 32, 36, 38–40, 47, 165–174, 176, 179, 183, 184, 187–189, 191, 192, 194, 196, 197, 199, 201–203, 206, 208, 212–215, 217, 219, 220, 222–225, 227, 229–232, 234–236, 238, 241–247, 250, 251, 259, 260, 263, 265, 266, 268, 270, 272–274, 276, 279, 294, 295

ŚB *Śatapatha Brāhmaṇa* (Vedic prose) 191

An Tablet series A, subseries n. 80, 82, 83

Ep Tablet series E, subseries p. 80

Eur. Euripides (Class., drama) 129, 294, 295

Fr Tablet series F, subseries r. 81

Ge Tablet series G, subseries e. 81

Hdt. Herodotus, *Histories* (Class.) 73, 118, 218

Hes. Hesiod (Homeric Greek, c. 750 BCE) 22, 77, 84, 106, 107, 116, 144, 147, 295

Hom. Homer (c. 800–700 BCE) 82, 140, 156, 290, 294, 295

MY Mycenae, referring to Mycenaean documents found at this site. 81

Nem. *Nemean Odes* of Pind. 87, 95

Nn Tablet series N, subseries n. 81

Pind. Pindar, *Odes* (late Archaic Greek, c. 518–438 BCE) 84, 87, 296

Plat. Plato (Class.) 67, 87, 109, 294

Ps.-Hes. Pseudo-Hesiod (Homeric Greek, c. 750 BCE) 22, 77, 107, 295

PY Pylos, referring to Mycenaean documents found at this site. 79–83

Soph. Sophocles (Class., drama) 87, 128, 294

Ta Tablet series T, subseries a. 79

Tob. Book of Tobit in *LXX* 81

Un Tablet series U, subseries n. 80, 82

Xen. Xenophon (Class.) 87, 294

ABBREVIATIONS OF REFERENCES

| | |
|--------------------------|----------------------------------------------------------------------------|
| <i>BK</i> | <i>See</i> Latacz, Joachim, René Nünlist, and Magdalene Stoevesandt. 2009. |
| <i>DMic</i> | <i>See</i> Jorro, Francisco Aura. 1985–93. |
| <i>Docs</i> ² | <i>See</i> Ventris, Michael, and John Chadwick. 1973. |
| Kühner–Gerth | <i>See</i> Kühner, Raphael, and Bernhard Gerth. 1898. |
| <i>LIV</i> ² | <i>See</i> Rix, Helmut, and Martin J. Kümmel, eds. 2001. |

REFERENCES

- Alexander, Caroline. 2015. *The Iliad: A New Translation*. New York: Ecco.
- Allen, Joseph Henry, and James Bradstreet Greenough. 1903. *Allen and Greenough's New Latin Grammar for Schools and Colleges*. Edited by George Lyman Kittredge, Albert Andrew Howard, and Benjamin Leonard D'Ooge. Boston: Ginn / Company.
- Altshuler, Daniel. 2014. A typology of partitive aspectual operators. *Natural Language Linguist Theory* 32:735–775.
- Arche, María J. 2006. *Individuals in Time: Tense, aspect and the individual/stage distinction*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Arregui, Ana, María Luisa Rivero, and Andrés Salanova. 2014. Cross-linguistic variation in imperfectivity. *Natural Language Linguist Theory* 32:307–362.
- Austin, John Langshaw. 1962. *How to Do Things with Words*. William James Lectures. Oxford: Clarendon Press.
- Avery, John. 1885. The Unaugmented Verb-Forms of the Rig- and Atharva-Vedas. *Journal of the American Oriental Society* 11:326–361.
- Bach, Emmon. 1981. On Time, Tense, and Aspect: An Essay in English Metaphysics. In *Radical Pragmatics*, edited by P. Cole, 63–81. New York: Academic Press.
- . 1986. The Algebra of Events. *Linguistics and Philosophy* 9:5–16.
- Bahloul, Maher. 1996. Extending the NegP hypothesis: Evidence from Standard Arabic. In *Perspectives on Arabic linguistics VIII: Papers from the eighth annual symposium on Arabic linguistics*, edited by Mushira Eid, 31–46. Amsterdam / Philadelphia: John Benjamins.
- Bakker, Egbert J. 2005. *Pointing at the Past: From Formula to Performance in Homeric Poetics*. Washington, D.C.: Center for Hellenic Studies.
- Bary, Corien. 2012. The Ancient Greek Tragic Aorist Revisited. Edited by Michael Meier-Brügger and Gerhard Meiser. *Glotta* (Göttingen) 88 (4): 31–53.
- Bary, Corien, and Markus Egg. 2012. Variety in Ancient Greek Aspect Interpretation. *Linguistics and Philosophy* 35:111–134.
- Bianconi, Michele. 2019. The Linguistic Relationship between Greek and the Anatolian Languages. PhD diss., University of Oxford.
- Binnick, Robert I. 1991. *Time and the Verb: A Guide to Tense and Aspect*. Oxford: Oxford University Press.

- Bloomfield, Maurice, and Franklin Edgerton. 1930. *Vedic Variants, vol. 1: The Verb*. Philadelphia: University of Pennsylvania Press.
- Boneh, Nora, and Edit Doron. 2008. Habituality and the Habitual Aspect. In *Theoretical and Crosslinguistic Approaches to the Semantics of Aspect*, edited by Susan Rothstein, 321–348. Amsterdam: John Benjamins.
- . 2010. Modal and Temporal Aspects of Habituality. In *Lexical Semantics, Syntax, and Event Structure*, edited by Malka Rappaport Hovav, Edit Doron, and Ivy Sichel, 338–363. New York: Oxford University Press.
- Bozzzone, Chiara. 2011. The Grammaticalization of the Ancient Greek Aorist and its Effects on the Greek Verbal System. *22nd International Conference on Historical Linguistics*, https://www.academia.edu/1693381/The_Grammaticalization_of_the%20_Ancient_Greek_Aorist.
- Bybee, Joan, and Östen Dahl. 1989. The creation of tense and aspect systems in the languages of the world. *Studies in Language* 13:51–103.
- Bybee, Joan, Revere Perkins, and William Pagliuca. 1994. *The Evolution of Grammar: Tense, Aspect and Modality in the Languages of the World*. Chicago: University of Chicago Press.
- Chantraine, Pierre. 1948 [2013]. *Grammaire homérique, Tome I: Phonétique et morphologie*. 2nd ed. Edited by Michel Casevitz. Paris: Klincksieck.
- . 1953 [2015]. *Grammaire homérique, Tome II: Syntaxe*. 2nd ed. Edited by Michel Casevitz. Paris: Klincksieck.
- Clackson, James. 2007. *Indo-European Linguistics : an Introduction*. Cambridge / New York: Cambridge University Press.
- Cohen, David. 1984. *La Phrase Nominale et l'Évolution du Système Verbal en Sémitique*. Paris: Société Linguistique de Paris.
- Comrie, Bernard. 1976. *Aspect*. Cambridge / New York: Cambridge University Press.
- Condoravdi, Cleo, and Ashwini Deo. 2014. Aspect Shifts in Indo-Aryan and Trajectories of Semantic Change. In *Language Change at the Syntax-Semantics Interface*, edited by Chiara Gianollo, Agnes Jäger, and Doris Penka, 261–291. Berlin: de Gruyter.
- Copley, Bridget. 2009. *The Semantics of the Future*. New York / London: Taylor & Francis.
- Crespo, Emilio. 2014. A Rule for the Choice of Aorist and Imperfect. In *The Greek Verb: Morphology, Syntax, and Semantics (Proceedings of the 8th International Meeting on Greek Linguistics, Agrigento, October 1–3, 2009)*, edited by Annamaria Bartolotta, 71–82. Louvain-la-Neuve / Walpole, Mass.: Peeters.

- Cuvalay-Haak, Martine. 1997. *The Verb in Literary and Colloquial Arabic*. Berlin / New York: Mouton de Gruyter.
- Dahl, Eystein. 2010. *Time, Tense and Aspect in Early Vedic Grammar*. Leiden / Boston: Brill.
- Dahl, Östen. 1985. *Tense and Aspect Systems*. Oxford: Blackwell.
- . 2000. The tense-aspect systems of European languages in a typological perspective. In *Tense and Aspect in the Languages of Europe*, edited by Östen Dahl, 3–25. Berlin / New York: Mouton de Gruyter.
- De Wit, Astrid. 2017. *The Present Perfective Paradox Across Languages*. Oxford studies of time in language and thought. Oxford: Oxford University Press.
- Delbrück, Berthold. 1876. *Altindische Tempuslehre*. Halle: Verlag der Buchhandlung des Waisenhauses.
- . 1879. *Die Grundlagen der griechischen Syntax*. Delbrück, Berthold: Syntaktische Forschungen. Halle: Verlag der Buchhandlung des Waisenhauses.
- . 1888. *Altindische Syntax*. Halle: Verlag der Buchhandlung des Waisenhauses.
- . 1893. *Vergleichende Syntax der indogermanischen Sprachen*. Strassburg: Karl J. Trübner.
- . 1897. *Vergleichende Syntax der indogermanischen Sprachen*. Vol. 2. Strassburg: Karl J. Trübner.
- Delfs, Lauren C.S. 2006. Evidence for the Origin of the Augment. Paper presented at the 25th East Coast Indo-European Conference, Columbus, Ohio, 21 June 2006.
- Delgado, José Miguel Jiménez. 2016. *Sintaxis del Griego Micénico*. Sevilla: Universidad de Sevilla.
- Demirdache, Hamida, and Myriam Uribe-Etxebarria. 2000. The Primitives of Temporal Relations. In *Step by Step: Essays on Minimalist Syntax in Honour of Howard Lasnik*, edited by Roger Martin, David Michaels, and Juan Uriagereka, 157–186. Cambridge, MA: MIT Press.
- Denison, David. 1998. Syntax. In *The Cambridge History of the English Language, vol. IV: 1776–1997*, edited by Suzanne Romaine and Richard M. Hogg, 92–329. Cambridge: Cambridge University Press.
- Deo, Ashwini. 2015a. Diachronic semantics. *Annual Review of Linguistics* 1:179–197.
- . 2015b. The semantic and pragmatic underpinnings of grammaticalization paths: The progressive to imperfective shift. *Semantics & Pragmatics* 8 (14): 1–52.
- . 2020. The Imperfective. In *The Wiley Blackwell Companion to Semantics*, edited by Daniel Gutzmann, Lisa Matthewson, Cécile Meier, Hotze Rullman, and Thomas Ede Zimmermann. The Wiley Blackwell Companions to Linguistics. Oxford: Wiley-Blackwell.

- Dickey, Stephen M. 1997. Parameters of Slavic Aspect. PhD diss., Indiana University.
- . 2000. *Parameters of Slavic aspect: A cognitive approach*. Stanford: CSLI Publications.
- . 2015. *Parameters of Slavic Aspect Reconsidered: The East-West Aspect Division from a Diachronic Perspective*. In *Studies in Accentology and Slavic Linguistics in Honor of Ronald F. Feldstein*, edited by Miriam Shrager, Edna Andrews, George Fowler, and Steven Franks, 29–45. Bloomington, IN: Slavica Publishers.
- Dowty, David R. 1977. Toward a Semantic Analysis of Verb Aspect and the English ‘Imperfective’ Progressive. *Linguistics and Philosophy* 1 (1): 45–77.
- . 1979. *Word Meaning and Montague Grammar: The Semantics of Verbs and Times in Generative Semantics and in Montague’s PTQ*. Dordrecht: Reidel.
- Drewitt, J. A. J. 1912. The Augment in Homer. *The Classical Quarterly* 6 (1 and 2): 44–59 and 104–120.
- Fischer, Olga. 1992. Syntax. In *The Cambridge History of the English Language, vol. II: 1066–1476*, edited by Norman Blake and Richard M. Hogg, 207–408. Cambridge: Cambridge University Press.
- Forsyth, James. 1970. *A Grammar of Aspect: Usage and Meaning in the Russian Verb*. Cambridge: Cambridge University Press.
- Fortson, Benjamin W. 2010. *Indo-European Language and Culture*. 2nd ed. Oxford, U.K. / Malden, MA: Wiley-Blackwell.
- Fortuin, Egbert. 2019. Universality and language-dependency of tense and aspect: Performatives from a crosslinguistic perspective. *Linguistic Typology* 23 (1): 1–58.
- Friedrich, Paul. 1974. On Aspect Theory and Homeric Aspect. *International Journal of American Linguistics* (Chicago) 40 (4.2): 1–44.
- Gerö, Eva-Carin, and Arnim von Stechow. 2003. Tense in Time: The Greek Perfect. In *Words in Time: Diachronic Semantics from Different Points of View*, edited by R. Eckardt, K. von Heusinger, and C. Schwarze, 251–293. Berlin: de Gruyter.
- Gildersleeve, Basil Lanneau, and Charles William Emil Miller. 1900. *Syntax of Classical Greek from Homer to Demosthenes*. Vol. 1. New York: American Book Company.
- Givón, Thomas. 2001. *Syntax*. Vol. 1. Amsterdam: John Benjamins.
- Goodman, Fred. 1973. On the Semantics of Futurate Sentences. *Ohio State University Working Papers in Linguistics* 16:76–89.
- Goodwin, William W. 1889. *Syntax of the Moods and Tenses of the Greek Verb*. Revised. London: Macmillan.

- Grassmann, Hermann. 1873. *Wörterbuch zum Rig-Veda*. Leipzig: P.A. Brockhaus.
- Green, Lisa. 2000. Aspectual *be*-type Constructions and Coercion in African American English. *Natural Language Semantics* 8:1–25.
- Grice, H. P. 1975. Logic and Conversation. In *Syntax and Semantics: Vol. 3: Speech Acts*, edited by Peter Cole and Jerry L. Morgan, 41–58. New York: Academic Press.
- Grønn, Atle. 2004. The Semantics and Pragmatics of the Russian Factual Imperfective. PhD diss., University of Oslo.
- . 2007. Horn strategies and optimization in Russian aspect. In *Proceedings of Language, Games, and Evolution*, 1–8. Dublin: ESSLLI workshop.
- . 2008a. Imperfectivity and complete events. In *Interdependence of diachronic and synchronic analyses*, edited by Folke Josephson and Ingmar Söhrman, 149–65. Amsterdam: John Benjamins.
- . 2008b. Russian Aspect as Bidirectional Optimization. In *Studies in Formal Slavic Linguistics*, edited by F. Marusic and R. Zaucer, 121–137. *Linguistik International* 19. Frankfurt: Peter Lang.
- Haspelmath, Martin. 2010. Comparative concepts and descriptive categories in crosslinguistic studies. *Language* 86 (3): 663–687.
- Hedin, Eva. 2000. The Type-referring Function of the Imperfective. In *Tense and Aspect in the Languages of Europe*, edited by Östen Dahl, 227–264. Berlin / New York: Mouton de Gruyter.
- Hermann, Eduard. 1927. Objektive und subjektive Aktionsart. *Indogermanische Forschungen* 45 (1): 207–228.
- Hoffmann, Karl. 1967. *Der Injunktiv im Veda: Eine synchronische Funktionsuntersuchung*. Heidelberg: Winter.
- Hoffner, Harry A., and H. Craig Melchert. 2008. *A Grammar of the Hittite Language, vol. I: Reference Grammar*. Winona Lake, IN: Eisenbrauns.
- Hollenbaugh, Ian. 2018. Aspects of the Indo-European Aorist and Imperfect: Re-evaluating the evidence of the *Ṛgveda* and Homer and its implications for PIE. *Indo-European Linguistics* 6:1–68.
- . 2020a. A New Approach to Prohibitive Constructions in the *Ṛgveda* and the *Atharvaveda*. *Journal of the American Oriental Society* 140 (4): 777–802.
- . 2020b. Augmented reality: A diachronic pragmatic approach to the development of the IE injunctive and augment. Paper presented at the 39th Annual East Coast Indo-European Conference, Blacksburg, VA. https://ihollenbaugh.files.wordpress.com/2020/12/augmented_reality_a_diachronic_pragmatic.pdf.

- Hollenbaugh, Ian. 2020c. Inceptives in Ancient Greek. In *Proceedings of the 31st Annual UCLA Indo-European Conference (November 8th–9th, 2019)*, edited by David M. Goldstein, Stephanie W. Jamison, and Brent Vine, 139–159. Bremen: Hempen.
- . 2020d. Mycenaean *o-/jo-* as an adverb in performative sentences. Paper presented at the graduate seminar of the Program in Indo-European Studies at UCLA, 15 May 2020. https://ihollenbaugh.files.wordpress.com/2021/06/myc-jo_hollenbaugh-2020.pdf.
- . 2021a. Prohibition types in Ancient Greek: A comparative approach. Paper presented at the Society for Classical Studies Annual Meeting (held online), 5 January 2021. https://ihollenbaugh.files.wordpress.com/2021/06/scs-2021_hollenbaugh_greek-prohibition.pdf.
- . 2021b. The development of the Imperfect in Ancient Greek from simple past to imperfective as a blocking phenomenon. *Journal of Greek Linguistics* 21 (1).
- Hoose, Anahita. 2020. Notes on Verbal Aspect in Two Vedic Prose Narratives. Paper presented at the graduate seminar of the Program in Indo-European Studies at UCLA, 12 November 2020.
- . 2021. Re-Examining the Tense System of Epic Sanskrit. Paper presented at the 231st Annual Meeting of the American Oriental Society (held online), 12–18 March 2021.
- Hopper, Paul J. 1982. Aspect between Discourse and Grammar: An Introductory Essay for the Volume. Chap. 1 in *Tense-Aspect: Between Semantics and Pragmatics*, edited by Paul J. Hopper, 33–18. Amsterdam: Benjamins.
- Huddleston, Rodney. 1977. The Futurate Construction. *Linguistic Inquiry* 8 (4): 730–736.
- Iatridou, Sabine. 2000. The Grammatical Ingredients of Counterfactuality. *Linguistic Inquiry* 31.2:231–70.
- Inglese, Guglielmo, and Simone Mattioli. 2020. Pluractionality in Hittite: A new look at the suffix *-škela-*. *Language Typology and Universals* 73 (2): 261–303.
- Jacobsohn, Hermann. 1933. Aspektfragen. *Indogermanische Forschungen* 51 (1): 292–318.
- Al-Jallad, Ahmad. 2018. The earliest stages of Arabic and its linguistic classification. In *The Routledge Handbook of Arabic Linguistics*, edited by Elabbas Benmamoun and Reem Bassiouney, 315–331. London: Routledge.
- Jamison, Stephanie W. 1983. *Function and form in the –áya– formations of the Rig Veda and Atharva Veda*. Göttingen: Vandenhoeck / Ruprecht.
- . 1990. The tense of the predicated past participle in Vedic and beyond. *Indo-Iranian Journal* 33 (1): 1–19.

- Jamison, Stephanie W. 1997. Formulaic Elements in Vedic Myth. In *Inside the Texts / Beyond the Texts: New Approaches to the Study of the Vedas. Proceedings of the International Vedic Workshop, Harvard University, 1989*, edited by Michael Witzel, 127–138. Cambridge, Mass.: Harvard University Dept. of Sanskrit / Indian Studies.
- . 2014. Review of Dahl 2010. *Indo-Iranian Journal* 57 (1/2): 151–160.
- . 2016. The Vedic Perfect Subjunctive and the Value of Modal Forms to Tense/Aspect Stems. In *Miscellanea Indogermanica: Festschrift für José Luis García Ramón zum 65. Geburtstag*, edited by Ivo Hajnal, Daniel Kölligan, and Katharina Zipser, 313–324. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
- . 2015–. *Rigveda Translation: Commentary*. Accessed 15 May 2021. WordPress. <http://rigvedacommentary.alc.ucla.edu/>.
- Jamison, Stephanie W., and Joel P. Brereton. 2014. *The Rigveda: The Earliest Religious Poetry of India*. Oxford / New York: Oxford University Press.
- Janda, Laura A. 2019. A metaphor in search of a source domain: The categories of Slavic aspect. *Cognitive Linguistics* 15 (4): 471–527.
- Janda, Laura A., and Antonio Fábregas. 2019. Seeing from without, seeing from within: Aspectual differences between Spanish and Russian. *Cognitive Linguistics* 30 (4): 687–718.
- Jorro, Francisco Aura. 1985–93. *Diccionario griego-micénico*. Madrid: Consejo Superior de Investigaciones Científicas, Instituto de Filología.
- Kellens, Jean. 1984. *Le verbe avestique*. Wiesbaden: Reichert.
- Kellens, Jean, and Eric Pirart. 1988. *Les Textes Vieil-Avestiques. Vol. I: Introduction, texte et traduction*. Wiesbaden: Reichert.
- Kells, J. H. 1973. *Sophocles: Electra*. Cambridge Greek and Latin Classics. Cambridge: Cambridge University Press. ISBN: 9780521097963.
- Kiparsky, Paul. 1968. Tense and Mood in Indo-European Syntax. *Foundations of Language* 4 (1): 30–57.
- . 1998. Aspect and Event Structure in Vedic. *Yearbook of South Asian Languages and Linguistics* 1998 1:29–62.
- . 2002. Event Structure and the Perfect. In *The Construction of Meaning*, edited by David I. Beaver, Luis D. Casillas, Martínez, Brady Z. Clark, and Stefan Kaufmann, 113–135. Stanford, CA: Center for the Study of Language / Information (CSLI).
- . 2005. The Vedic Injunctive: Historical and synchronic implications. *The Yearbook of South Asian Languages and Linguistics* 8:219–235.

- Klein, Wolfgang. 1994. *Time in Language*. New York: Routledge.
- Kouwenberg, N. J. C. 2010. *The Akkadian Verb and Its Semitic Background*. Winona Lake, Indiana: Eisenbrauns.
- Kratzer, Angelika. 1995. Stage-Level and Individual-Level Predicates. In *The Generic Book*, edited by Gregory N. Carlson and Francis Jeffry Pelletier, 125–175. Chicago: The University of Chicago Press.
- Krüger, Karl Wilhelm. 1873. *Griechische Sprachlehre für Schulen, zweites Heft: Syntax*. Berlin: K. W. Krügers Verlagsbuchhandlung.
- Kühner, Raphael, and Bernhard Gerth. 1898. *Ausführliche Grammatik der griechischen Sprache, Teil 2: Satzlehre, Bd. I*. Edited by Bernhard Gerth. Hannover / Leipzig: Hahnsche Buchhandlung.
- Kümmel, Martin Joachim. 2000. *Das Perfekt im Indoiranischen: Eine Untersuchung der Form und Funktion einer ererbten Kategorie des Verbums und ihrer Weiterentwicklung in den altindoiranischen Sprachen*. Wiesbaden: Reichert Verlag.
- . 2021–. Liste vedischer Verbstämme und Formen. Accessed May 2021. https://www.academia.edu/1147267/Vedische_Verbliste.
- Laca, Brenda. 2010. Perfect Semantics: How Universal Are Ibero-American Present Perfects? In *Selected Proceedings of the 12th Hispanic Linguistics Symposium*, edited by Claudia Borgonovo, Manuel Español-Echevarría, and Philippe Prévost, 1–16. Somerville, MA: Cascadia Proceedings Project.
- Latacz, Joachim, René Nünlist, and Magdalene Stoevesandt. 2009. *Homers Ilias: Gesamtkommentar (Basler Kommentar / BK)*. Vol. 1.2. Berlin / New York: De Gruyter.
- Lloyd, Michael. 1999. The Ancient Greek Tragic Aorist Revisited. *The Classical Quarterly* (Cambridge) 49 (1): 24–45.
- Lowe, John. 2015. *Participles in Rigvedic Sanskrit*. Oxford: Oxford University Press.
- Lundquist, Jesse, and Anthony D. Yates. 2018. The Morphology of Proto-Indo-European. In *The Handbook of Comparative and Historical Indo-European Linguistics*, edited by Jared S. Klein and Brian D. Joseph, 2079–2195. Berlin: de Gruyter.
- Macdonell, Arthur Anthony. 1916. *A Vedic Grammar for Students*. Oxford: Oxford University Press.
- McCawley, James D. 1971. Tense and Time Reference in English. In *Studies in Linguistic Semantics*, edited by Charles Fillmore and D. T. Langendoen, 97–113. New York: Holt Rinehart.
- McCoard, R. W. 1978. *The English Perfect: Tense Choice and Pragmatic Inferences*. Amsterdam: North Holland.

- Mittwoch, Anita. 2008. The English resultative perfect and its relationship to the experiential perfect and the simple past tense. *Linguistics and Philosophy* 6:323–351.
- Moens, Marc, and Mark Steedman. 1988. Temporal ontology and temporal reference. *Computational Linguistics* 14:15–28.
- Napoli, Maria. 2006. *Aspect and Actionality in Homeric Greek: A Contrastive Analysis*. Milan: Angeli.
- Narten, Johanna. 1964. *Die Sigmatischen Aoriste im Veda*. Wiesbaden: Otto Harrassowitz.
- Platt, Arthur. 1891. The augment in Homer. *Journal of Philology* 19:211–237.
- Prince, Ellen. 1973. Futurate *Be -ing*, or Why *Yesterday morning, I was leaving tomorrow on the Midnight Special* is OK. Unpublished paper, read at the 1973 Summer Meeting of the Linguistic Society of America.
- Probert, Philomen. 2008. Mycenaean *o-* is accusative; *jo-* is nominative. *Glotta* 84:126–168.
- Purdie, Eleanor. 1898. The Perfective ‘Aktionsart’ in Polybius. *Indogermanische Forschungen* 9:62–153.
- Ramchand, Gillian C. 1996. Two Subject Positions in Scottish Gaelic: The Syntax-Semantics Interface. *Natural Language Semantics* 4:165–191.
- . 2018. *Situations and Syntactic Structures: Rethinking Auxiliaries and Order in English*. Cambridge, MA: MIT Press.
- Reichenbach, Hans. 1947. *Elements of Symbolic Logic*. New York: Collier-MacMillan.
- Rijksbaron, Albert. 2002. *The Syntax and Semantics of the Verb in Classical Greek*. Chicago / London: The University of Chicago Press.
- Rissanen, Matti. 1999. Syntax. In *The Cambridge History of the English Language, vol. III: 1476–1776*, edited by Roger Lass and Richard M. Hogg, 187–331. Cambridge: Cambridge University Press.
- Rix, Helmut, and Martin J. Kümmel, eds. 2001. *Lexikon der indogermanischen Verben: Die Wurzeln und ihre Primärstammbildungen*. 2nd ed. Wiesbaden: Reichert.
- Ruipérez, Martín Sánchez. 1954. *Estructura del sistema de aspectos y tiempos del verbo griego antiguo: análisis funcional sincrónico*. Theses et Studia Philologica Salmanticensia (vol. 7). Salamanca: Colegio Trilingüe de la Univ.
- Schaeffer, Christiane. 1994. *Das Intensivum im Vedischen*. Göttingen: Vandenhoeck & Ruprecht.
- Schwyzler, Eduard, and Albert Debrunner. 1950. *Griechische Grammatik, Bd. II: Syntax und syntaktische Stilistik*. Edited by Albert Debrunner. München: C.H. Beck.

- Sellami, Zeineb. 2020. *Hinnēh's Interaction with the Verbal System in Biblical Hebrew Prose*. Master's thesis, The University of Chicago. https://cpb-us-w2.wpmucdn.com/voices.uchicago.edu/dist/2/2933/files/2020/10/Ma_thesis.pdf.
- Smith, Carlota S. 1997. *The Parameter of Aspect*. Second. Dordrecht / Boston / London: Kluwer.
- Smyth, Herbert Weir. 1956. *Greek Grammar*. Revised. Harvard University Press.
- von Stechow, Arnim. 1995. On the Proper Treatment of Tense. In *Proceedings of SALT 5*, edited by Teresa Galloway and Mandy Simons, 362–386. Ithaca: Cornell University.
- Traugott, Elizabeth Closs. 1992. Syntax. In *The Cambridge History of the English Language, vol. I: The Beginnings to 1066*, edited by Richard M. Hogg, 168–289. Cambridge: Cambridge University Press.
- Vendler, Zeno. 1957. Verbs and Times. *The Philosophical Review* 66:143–160.
- Ventris, Michael, and John Chadwick. 1973. *Documents in Mycenaean Greek*. 2nd ed. Cambridge, UK: Cambridge University Press.
- Wackernagel, Jacob. 1920. *Vorlesungen über Syntax mit besonderer Berücksichtigung von Griechisch, Lateinisch und Deutsch*. Basel: Birkhäuser.
- . 1926–8 [2009]. *Lectures on Syntax: With Special Reference to Greek, Latin, and Germanic*. Edited and translated by David Langslow. Oxford / New York: Oxford University Press.
- Weiss, Michael. 2020. *Outline of the Historical and Comparative Grammar of Latin*. 2nd ed. Ann Arbor / New York: Beech Stave.
- West, Martin L. 1989. An unrecognized injunctive usage in Greek. *Glotta* 67:135–138.
- . 2017. *Homerus Odyssea*. Berlin: de Gruyter.
- . 1998–2000. *Homeri Ilias*. Vol. I–II. Berlin / Leipzig: B.G. Teubner.
- Whitney, William Dwight. 1885. *The Roots, Verb-forms, and Primary Derivatives of the Sanskrit Language*. Leipzig: Breitkopf & Härtel.
- . 1889. *A Sanskrit Grammar*. Leipzig: Breitkoff & Härtel.
- Willi, Andreas. 2018. *The Origins of the Greek Verb*. Cambridge / New York: Cambridge University Press.